

# Number and Timing of Routine Antenatal Visits

Guidelines	Level of evidence	References
Early in pregnancy all women should receive appropriate written information about the likely number, timing and content of antenatal visits associated with different options of care and be given an opportunity to discuss this schedule with their midwife or doctor.	IV	8a, 9a, 10a
For low risk women, irrespective of model of care, the traditional schedule of 14 visits may be safely reduced to between seven and ten visits without adversely affecting perinatal outcomes. *See good practice notes	I	1, 2, 3, 4, 4a,5a
The number and timing of visits should be flexible to suit the needs of individual women. Additional visits should be provided if women or their midwife or doctor perceive a need, or as complications arise.	II	3a
Good Practice Notes		
Information on the content of visits should include information on the rationale and timing of routine tests and investigations.  It is important to establish each person's expectations and understanding, as women may have a different perspective on the purpose and timing of antenatal visits.  The option and timing of additional visits, and a mechanism by which such visits may be accessed, should be discussed with all women.	Consensus Opinion	
Each visit should be structured as a milestone, with focused content, and with a longer first visit for the purpose of comprehensive assessment and discussion. Wherever possible visits should incorporate routine tests and investigations to minimise inconvenience to women.	Consensus Opinion	
* A reduction in the number of visits may lead to decreased satisfaction with care for some women (or increased anxiety), especially in their first experience of a reduced schedule. In particular a rigid and imposed reduction in visits is reported to increase dissatisfaction.	III-2	2,2a, 3, 3a, 4a,5a,6a,7a , 18, 20
The evidence accumulated for the 3 Centres project suggests a baseline antenatal schedule as follows: <b>First Trimester.</b> From the carer's perspective, first trimester visits are primarily to assess maternal and fetal well-being, particularly the risk of complication; this will include		

taking a comprehensive history, dating the pregnancy, discussing smoking behaviour and establishing care options. The visits are scheduled in order to offer screening tests recommended in these guidelines (for Asymptomatic Bacteriuria, Syphilis, HBV, HCV, HIV and Down syndrome).

**Second Trimester.**

Second trimester visits are primarily scheduled to monitor fetal growth, maternal well-being and signs of early-onset pre-eclampsia. If ultrasound is routinely offered then it should be included as part of a visit at 18-20 weeks. If women have glucose screening this should be part of a visit at 24-28 weeks.

**Third Trimester.**

Third trimester visits are primarily to monitor fetal growth, maternal well-being, signs of pre-eclampsia, and to assess and prepare women for admission, labour and going home. These visits may include bacteriological screening for GBS (at 35-37 weeks), and preparations for admission, labour and 'going home', consistent with other guidelines.

## Aim

The aim of these guidelines is to provide information to midwives and doctors regarding the number and timing of routine antenatal visits for low risk women.

## Introduction

The 3 Centres Collaboration contracted the Royal Women's Hospital (RWH) Clinical Practice Improvement Unit (CPIU) to conduct a comprehensive search and critical appraisal of publications addressing the topic of "The number and timing of routine antenatal visits", between January 2000 and April 2005, to inform the proposed review of the 2001 3 Centres Consensus Guidelines on Antenatal Care.

An antenatal visit is defined as an intentional encounter between a pregnant woman and a midwife or doctor to assess and improve maternal and fetal well-being throughout pregnancy and prior to labour. The rationale for the 'traditional' schedule developed in the UK during the 1920s is based on the theory that regular visits with predefined content enable midwives and doctors to detect conditions in mother and baby that may threaten their health. Conditions are then monitored or treated to ensure a safe delivery and better outcomes. The 'traditional' number of antenatal visits is approximately 14, based on early presentation and a schedule of four weekly visits until 28 weeks gestation, then fortnightly visits until 36 weeks gestation, followed by weekly visits until birth. This schedule does not always include additional visits required for new technologies such as routine fetal anomaly screening tests, antenatal classes, social needs assessment or postnatal planning. Over the last twenty years various studies have questioned the traditional schedule for both frequency and content in relation to perinatal outcome, cost-effectiveness and satisfaction with care. The number, timing and content of antenatal visits should be structured to reflect the preferences of the mother, and to optimise accurate diagnosis and management of maternal and fetal complications.

## Research questions addressed

1. In low risk pregnant women is a reduced schedule of visits as effective as the traditional schedule of approximately 14 visits in achieving positive perinatal outcomes?
2. In low risk women is a reduced schedule of visits as effective as the traditional schedule in terms of women's satisfaction with care?
3. Is a reduced schedule of visits (<14) as effective in low risk primigravida as in low risk multigravidas in achieving positive perinatal outcomes and satisfaction with care?
4. In low risk women is a reduced schedule of visits (<14) more cost effective than the traditional schedule?

## Evidence

It is essential that routine antenatal care delivers effective and appropriate screening, preventive, or treatment interventions. Thus, the number of visits should ensure delivery of these interventions in a timely way during pregnancy, without any clinically important increase in the risk of adverse outcomes<sup>2</sup>. If reduced antenatal visits are adopted for low risk women, a plan must be in place to direct the practitioner to early and prompt referral for departures from the low risk pathway<sup>22</sup>.

- 1. In low risk pregnant women is a reduced schedule of visits as effective as the traditional schedule of approximately 14 visits in achieving positive perinatal outcomes?**

In low risk pregnant women a reduced schedule of antenatal visits appears to be as effective as the traditional schedule of approximately 14 visits in achieving positive perinatal outcomes.

In particular, there is no clinical difference when the number of antenatal visits was reduced with respect to preeclampsia, urinary tract infection, post partum anaemia, maternal mortality, antepartum haemorrhage, induction of labour,

caesarean section, postpartum haemorrhage, small for gestational age, admission to NICU and low birth weight,<sup>2,3</sup>.

**Recommendation (A-B)**

The 3 Centre Collaboration concurs with the RCOG recommendations of:

“A schedule of antenatal appointments should be determined by the function of the appointments. For a woman who is nulliparous with an uncomplicated pregnancy, a schedule of ten appointments should be adequate. For a woman who is parous with an uncomplicated pregnancy, a schedule of seven appointments should be adequate.”<sup>1</sup>

“Early in pregnancy, all women should receive appropriate written information about the likely number, timing and content of antenatal appointments associated with different options of care and be given an opportunity to discuss this schedule with their midwife or doctor.”<sup>1</sup>

“Each antenatal appointment should be structured and have focused content. Longer appointments are needed early in pregnancy to allow comprehensive assessment and discussion. Wherever possible, appointments should incorporate routine test and investigations to minimize inconvenience to women.”<sup>1</sup>

An important caveat in the Australian care setting is that antenatal care must be individualized in particular for groups such as the indigenous community who may be at higher risk of adverse pregnancy outcomes

**2. In low risk women is a reduced schedule of visits as effective as the traditional schedule in terms of women’s satisfaction with care**

Evidence regarding women’s satisfaction with care with a reduced schedule of visits is conflicting. In general, satisfaction appears to be reduced, and women in general prefer the traditional number of antenatal visits.<sup>2,3,20</sup> However, factors including increased number of children and maternal age >35 years and unfortunate timing of pregnancy may result in a wish for fewer antenatal visits. A desire for more visits was associated with depression, previous

miscarriage, previous negative birth experience and in primiparas maternal age <25 years and assisted conception.<sup>18</sup>

Continuity of care has consistently been identified as an important factor for maternal satisfaction with care. In the largest study, women and providers accepted the new antenatal care model generally.<sup>20</sup>

**Recommendation (Grade A-B)**

Women may be less satisfied with antenatal care when a reduced schedule of visits is implemented. However, the majority of women expressed satisfaction with antenatal care.

Particular attention should be paid to women with a miscarriage or a negative birth experience.

**3. Is a reduced schedule of visits (<14) as effective in low risk primigravida as in low risk multigravidas in achieving positive perinatal outcomes and satisfaction with care?**

Primiparas were less likely to express a preference than multiparas for the model of antenatal care. Of those who expressed a preference the majority would opt for 'traditional' care. There is limited data comparing perinatal outcomes for primiparas versus multiparas.<sup>21</sup>

**Recommendation (Grade B)**

Women’s preferences regarding antenatal care schedule should be considered when individualizing antenatal care management.

**4. In low risk women is a reduced schedule of visits (<14) more cost effective than the traditional schedule?**

Evidence regarding cost effectiveness of reduced schedule of visits is conflicting.<sup>1,2</sup>

**Recommendation (Grade A)**

There is limited evidence regarding cost effectiveness of reduced schedule of antenatal visits.

## Methods of search and Appraisal

### Search strategy

- The OVID interface was used to search the following electronic databases:
  - MEDLINE: 2000 – May 2005
  - CINAHL: 2000 – May 2005
  - EBM Reviews: January 2000 – May 2005
- Cochrane Database: 2005 Issue 2
- Review of article citations and Cochrane Library references for additional citations
- Guidelines developed by specific Colleges of Obstetricians and Gynaecologists were searched including:
  - Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG)
  - Royal College of Obstetricians and Gynaecologists (RCOG), and
  - Society of Obstetricians and Gynaecologists Canada (SOGC).
- Guidelines developed by other groups were searched for via the internet, on the United States National Guidelines Clearinghouse.

### Search terms

The search was conducted in three sections and included search terms: antenatal, pregnancy, visit, schedule, consultation +outcome, prenatal diagnosis, satisfaction, cost effectiveness, cost/benefit analysis.

### Initial search

Two guidelines were retrieved. The AGREE tool was applied by the project team and as a result the first one was included as a key citation.

- Royal College of Obstetricians and Gynaecologists (RCOG). Clinical Guideline: Antenatal care: routine care for the healthy pregnant woman<sup>1</sup>.
- Institute for Clinical Systems Improvement (ICS). Health Care

Guideline: Routine prenatal care.

In addition to the guidelines, the initial search applied the following inclusion and exclusion criteria to retrieve 138 citations

### Key citation selection

All 140 citations identified in the initial search were triaged into those:

- Possibly containing relevant evidence or authoritative opinion (72 citations), and
- Unlikely to contain relevant evidence or authoritative opinion (68 citations). These citations were either too general or not relevant to the topics to be addressed and were not considered further.

The 68 citations were retrieved and further screened to identify those studies with respect to quality of methodology and relevance to Australian obstetric practice. As a result of this exercise 21 articles were classified as key citations, and were subjected to systematic critical appraisal by the CPIU project team and those not meeting the criteria were discarded.

The evidence within these 21 key citations fell into the following levels:

- Level I evidence: 2 publications
- Level II evidence: 3 publications,
- Level III evidence: 6 publications, and
- Level IV evidence: 10 publications.

## References

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- Note: References with an "a" are original 2001 references