

Bed rest during pregnancy for preventing miscarriage

NICE has developed the Cochrane Quality and Productivity (QP) topics to help the NHS identify practices which could be significantly reduced or stopped completely, releasing cash and/or resources without negatively affecting the quality of NHS care. Each topic has been derived from a Cochrane systematic review that has concluded that the evidence shows that the practice is harmful or ineffective and should not be used, or that there is insufficient evidence to support widespread use of the practice.

Summary

NICE summary of review conclusions

Recommending bed rest to prevent miscarriage is not supported by sufficient good quality evidence. Consideration could be given to using it only in the context of a research or audit project.

There is currently little evidence for bed rest in women at high risk of miscarriage or those who have had a threatened miscarriage improving the outcome of the pregnancy. In view of the potential negative consequences of bed rest in terms of increased risk of thromboembolic disease, muscle atrophy, depression and loss of productivity, bed rest cannot be currently recommended routinely.

The 'Implications for practice' section of the Cochrane review stated:

"There is not enough information to justify the recommendation of bed rest for women with threatened miscarriage or at high risk of miscarriage. There is currently no evidence to give reassurance that such a policy could not be harmful for women and their families since none of the studies assesses potential side-effects of bed rest (thromboembolic events, maternal stress, depression, costs). Until further evidence is available the policy of bed rest cannot be recommended for routine clinical practice for women with threatened miscarriage or at high risk of miscarriage."

Details of Cochrane review

Cochrane review title

Bed rest during pregnancy for preventing miscarriage

Citation

[Aleman A, Althabe F, Belizán JM, Bergel E. Bed rest during pregnancy for preventing miscarriage. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD003576. DOI: 10.1002/14651858.CD003576.pub2](#)

When the review content was assessed as up to date

23 April 2008

QIPP category

Right care
Mobilisation

Cochrane Quality and Productivity topics

| | | | |
|----------------|---------------|-------------|-----|
| Relevant codes | OPCS | ICD10 | HRG |
| | Non-operative | O03.0–O03.9 | M09 |

Programme budget

Maternity and reproductive health

Evidence

Relevance to the NHS

Miscarriage is pregnancy loss before 23 weeks of gestational age and occurs in 10–15% of pregnancies. Usually it is associated with chromosomal defects in the fetus. Bed rest is historically the most prescribed preventive strategy for miscarriage because it was thought that hard work and physical activity during pregnancy were causative.

This study aimed to evaluate the effect of bed rest during pregnancy to prevent miscarriage in high risk women. High risk was defined as women with a previous history of miscarriage (fewer than three consecutive miscarriages) or threatened miscarriage in the current pregnancy. Studies including women with three or more consecutive miscarriages were excluded as these are likely due to a different and more precise aetiological factor.

Only two studies including 84 women were identified, both of which focused on women with threatened miscarriages. The first study randomised women into three groups: bed rest, placebo injection and normal activity, or injection with human chorionic gonadotrophin (hCG) and normal activity. The second study randomised women to either bed rest at home, bed rest and hospitalisation and normal activity. There was no significant difference in the risk of miscarriage in any of the following comparison groups: the bed rest group versus no bed rest group (both studies); the bed rest at home group versus no bed rest (second study); or the bed rest in hospital group versus no bed rest (second study).

For the study that examined the effect of hCG injections, there was no significant difference in the risk of miscarriage in the bed rest arm versus the placebo arm, nor in the placebo arm versus hCG injection arm. However, there was a higher risk of miscarriage in women in the bed rest group than in the hCG therapy group with no bed rest (relative risk [RR] 2.50, 95% confidence interval [CI] 1.22 to 5.11). This paper also analysed the mean gestational age at completed miscarriage and found that this was lower in the bed rest arm than the placebo arm (12 weeks versus 13.5 weeks, no confidence intervals reported).

Bed rest may increase the likelihood of thromboembolic events, muscle atrophy and symptoms of musculoskeletal and cardiovascular deconditioning. It may also be stressful and costly for women and their family. Previous studies have suggested it may actually increase costs for the health service. Therefore if there is a lack of evidence for bed rest, then it should no longer be recommended.

Relevant NICE guidance

[Pain and bleeding in early pregnancy: assessment and initial management of ectopic pregnancy and miscarriage in the first trimester](#)

NICE is currently developing guidance on this topic. The estimated publication date is November 2012.

[Multiple pregnancy: the management of twin and triplet pregnancies in the antenatal period – NICE clinical guideline 129](#)

(Published: September 2011)

Cochrane Quality and Productivity topics

1.5.2 Preventing preterm birth

1.5.2.1 Do not use the following interventions (alone or in combination) routinely to prevent spontaneous preterm birth in twin or triplet pregnancies:

- bed rest at home or in hospital
- intramuscular or vaginal progesterone
- cervical cerclage
- oral tocolytics.

Potential productivity savings

Estimate of current NHS use

Based on the [NHS maternity statistics for 2010–11](#), the number of pregnancies in England is estimated as 722,300. Of these it is estimated that 20–30% (144,460–216,690) experience some vaginal bleeding in early pregnancy. In about 50% (90,300) of women who experience haemorrhages, the fetuses have no detectable cardiac activity. The total number of miscarriages in England in 2010–11 was 43,005 (6.4 per 100 deliveries).

Level of productivity savings anticipated

It is difficult to quantify the potential saving that could be achieved from not prescribing bed rest for women with threatened miscarriage or at high risk of miscarriage. However, the tariff for 'Threatened or spontaneous miscarriage – MB08Z' is £461 (both elective/daycase and non-elective). The tariff for an extra day is £250 (NHS national tariff 2011/12).

Type of saving

Minimal impact on cash, but high levels of improved productivity are forecast

Any costs required to achieve the savings

No additional resources needed

Other information

The saving is likely to impact across both community and hospital prescribing budgets.

Potential impact on quality of NHS care

Impact on clinical quality

Not anticipated to have any impact (favourable or adverse) on quality of care delivered to patients

Impact on patient safety

A small decrease in the risk of thromboembolic events, musculoskeletal and cardiovascular deconditioning could be anticipated.

Impact on patient and carer experience

Improved patient and carer experience anticipated

Cochrane Quality and Productivity topics

Likely ease of implementation

Time taken to implement

Can be achieved quickly: 0–3 months

Healthcare sectors affected

Affects one department or team

Stakeholder support

Likely to achieve good buy-in from key influencers
