TREATMENT

Early labour assessment improved several intrapartum outcomes

McNiven PS, Williams JI, Hodnett E, et al. *An early labor assessment program: a randomized, controlled trial.* Birth 1998 Mar;25:5-10.

Question

Can early labour assessment improve intrapartum outcomes?

Design

Randomised controlled trial.

Setting

A large teaching hospital in southwestern Ontario, Canada.

Patients

209 women (mean age 25 y) who were ≥ 37 weeks gestation, had no previous live births, were identified as low risk according to the Ontario antenatal record, and who had spontaneous labour.

Intervention

105 women were allocated to early assessment of labour status (active or latent). Active labour was defined as the presence of regular, painful contractions and cervical dilation > 3 cm. Those not in active labour were provided with encouragement and advice and told to return home or walk outside until labour became more active. 104 women were allocated to direct hospital admission. All women received usual intrapartum care.

Main outcome measures

Rates of caesarean section birth; oxytocin, epidural, or narcotic use, forceps delivery; vacuum extraction; amniotomy; labour duration and experience; and newborn outcomes.

Main results

Analysis was by intention to treat. Women who received early labour assessment used less oxytocin, epidurals, or narcotics (table); had shorter durations between admission and delivery (8.3 v 13.5 h, $p=0.001$) and between full dilation and delivery (77 v 95 min, $p=0.045$); and more positive experiences (higher Labor Agency Scale scores, 158 v 142, $p=0.001$) compared with women who were admitted directly. No differences existed for caesarean section births, forceps delivery, vacuum extraction, or amniotomy (table); or newborn outcomes.

Conclusion

Early labour assessment did not decrease caesarean section births but decreased oxytocin, epidural, or narcotic use, and labour duration; and improved the labour experience.

Early labour assessment (ELA) v direct admission (DA)*

Outcomes	ELA	DA	RRR (95% CI)	NNT (CI)
Caesarean section	8%	11%	28% (-67 to 69)	NS†
Oxytocin use	23%	40%	43% (14 to 63)	6 (3 to 20)
Epidural or narcotic use	80%	92%	13% (4 to 23)	8 (5 to 33)
Forceps delivery	10%	14%	29% (-49 to 67)	NS
Vacuum extraction	21%	22%	5% (-58 to 43)	NS
Amniotomy	47%	54%	13% (-14 to 34)	NS

*Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article; †NS = not significant.

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Commentary

Past research has shown that women with a mean cervical dilation of ≤ 3 cm on hospital admission have longer lengths of labour, an increased number of intrapartum interventions, and more diagnoses of complicated labour.¹ To diagnose active labour, some hospitals have established early labour assessment or triage programmes. The study by McNiven *et al* is the first randomised controlled trial to evaluate such a programme.

Study strengths include the random assignment of women to early labour assessment or direct admission to hospital. The outcomes measured were not only about interventions, labour, and the newborn but also about the women's evaluations of the experience. 2 limitations could have affected study results. Firstly, although there were fewer caesarean section births in the early assessment group, the difference did not reach statis-

tical significance. The authors explain that they were not able to calculate a sample size and therefore chose 200 to be a feasible sample size. This sample size may have been too small to detect differences in caesarean delivery rates. Secondly, all caregivers did not comply with the study protocol and therefore a large number of women in the control group were sent home from the labour and delivery unit. Because some women in the control group received the intervention, the 2 groups were more alike than intended.

Assessment area nurses or medical interns conducted vaginal examinations to determine cervical dilation and whether active labour had begun. They also provided support, encouragement, and advice. When it was unclear whether a woman was in labour, the nurse asked the patient to remain in the assessment area for several hours to reassess her labour progress.

When active labour was reached, the nurse transferred the woman to the labour and delivery unit. It is important that nurses assess each woman individually not only to determine onset of labour but also to evaluate their emotional status. Some women, particularly those who are poorly supported, frightened, or who have had past adverse experiences, may benefit from remaining in the hospital setting.

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1 Hemminki E, Simukka R. *Eur J Obstet Gynecol Reprod Biol* 1986;22:85-94.