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## Midwife-led birth units – from innovation to closure

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EDITORIAL

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**Midwife-led birth units were originally established to alleviate the working situation of rural midwives. Most midwife-led birth units have now been closed due to low delivery rates.**

The safety of midwife-led birth units is a recurrent topic of discussion. The literature has shown good results for these units, but the source data have been insufficient (1). One of the problems, which also applies to statistics from the Medical Birth Registry, is that transfers from midwife-led birth unit to hospital during or after the birth have not been taken into account. There is therefore a risk of selection bias in many data sets.

Avoiding interventions is a fundamental objective of midwife-led birth units. Low incidence of caesarean section and vacuum extraction are therefore relevant quality indicators for midwife-led birth units, as well as low incidence of unwanted occurrences such as low Apgar score, postpartum haemorrhage, tears and sphincter injury.

Øian and colleagues have surveyed transfers from midwife-led birth units to hospital maternity wards in a three-year period, with the aid of a questionnaire distributed by the Medical Birth Registry (2). Their investigation supports findings from a previous study of Norwegian midwife-led birth units, which also included transfers between midwife-led birth units and hospitals (3). Øian and colleagues show good results for planned deliveries in midwife-led birth

units, also when transfers are taken into account (2). Only 0.6 % of infants born in midwife-led birth units had an Apgar score of less than seven after five minutes, and there were no reports of serious injury or death of mother or child that could be related to delivery in a midwife-led birth unit. High figures for vacuum extraction (14 %) and emergency caesarean section (11.8 %) indicate that intervention is often necessary in birthing women who are transferred, even though they belonged to a selected low-risk population at the time they went into labour. This shows the impossibility of predicting with certainty at the start of labour what form the delivery will finally take.

Fetal distress, or abnormal cardiotocography (CTG) on arrival at the unit was a frequent reason for transfer in the study (2). Use of CTG registration in midwife-led birth units is not consistent with good practice. According to the guidelines, CTG examination ought not to be used in low-risk births, which, by definition, those selected to take place in midwife-led birth units should be (4). The fact that as many as 7.7 % of births in midwife-led birth units were not planned to take place in these units raises the question of whether the selection process is adequate. It is also difficult to understand why 1.4 % of the births in midwife-led birth units were breech deliveries; this is almost on a level with the incidence of breech deliveries in maternity wards.

A large number of midwife-led birth units were established in the post-war years to alleviate the working situation of rural midwives (5). The maximum number of midwife-led birth units that have existed in Norway is not known. In 1972, there were still 60 such units in Norway, where a total of 7.4 % of the country's births took place (6). These midwife-led birth units were part of the rural health service, whereby midwives called on the local duty doctor if they needed assistance (6). Many district medical officers and junior doctors in these situations have experienced their own level of incompetence.

Today the organisation and responsibilities in Norwegian midwife-led birth units have changed. The regional health trusts have medical responsibility for the units (7), and clear criteria exist for who may give birth there. Transfer to the nearest maternity unit is undertaken if problems arise that the midwife cannot resolve.

The ambulance service is well equipped, and transfers usually take place without drama (2, 3). However, although the organisational conditions for operating midwife-led birth units are provided for, many of these units have been closed in the last decade, mainly due to low delivery rates. Now only four traditional midwife-led birth units remain, all in the Northern Norway Regional Health Authority (2).

Midwife-led birth units in local hospitals – modified birth units – constituted an innovation that was tested in Lofoten from 1997, with good results (8). In the same year, the maternity ward at Tynset Hospital was converted to a midwife-led birth unit. In more recent years, an attempt has been made at several local hospitals with low delivery rates to convert maternity wards to midwife-led birth units, to provide delivery service for low-risk pregnant women in rural Norway. These modifications have not been successful, and today only Tynset Hospital and Lofoten Hospital have retained their midwife-led birth units.

The article written by Øian and colleagues (2) includes outcomes for the rather euphemistically named reinforced midwife-led birth units, i.e. midwife-led birth units in local hospitals that have the opportunity to perform caesarean sections in emergency situations. In the period 2008–10, at the modified midwife-led birth units in Lærdal, Odda and Lofoten caesarean sections were performed for 9.5 % of women in labour, and forceps or vacuum deliveries for 3.6 %. Sphincter injury occurred in 2.5 % of the women (2). Since these were essentially low-risk births, this represents a remarkably high level of intervention. A significant proportion were preterm births (1.8 %), which should not take place in midwife-led birth units.

Falling delivery rates, which are in large part due a decline in the number of women seeking to use midwife-led rural obstetric units, have most likely been the main reason for closures of midwife-led birth units in recent years. Perhaps the service offered by modern obstetrics, including effective pain relief, is more important for many women than the opportunity to give birth a little closer to home.

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