



## Consensus Statement: **Umbilical Cord Blood Banking**

The New Zealand College of Midwives believes that evidence of probability of any benefit for routine private cord blood collection needs to be explained to prospective parents in an unbiased manner.

Furthermore NZCOM believes that any interference with the third stage of labour needs to be a considered decision to support best outcomes for both mother and baby<sup>1-3</sup>. Unnecessary intervention may carry risk to both mother and baby.

The midwife should be focused on the immediate care of the mother and baby during the third stage of labour<sup>4,5</sup>.

Early clamping of the umbilical cord for cord blood collection has long been practiced and generally considered safe to a baby. However, evidence supports delayed cord clamping (waiting 3 minutes) in newborns, enhances placental transfusion at birth and improves iron stores at six months of age<sup>6-9</sup>.

### **Guidelines/Recommendations:**

All information about cord blood collection and banking must be balanced and accurate regarding its advantages and disadvantages.

Parents must be informed that stem cells can make copies only of themselves. The blood forming stem cells found in cord blood make new blood cells to replace old ones in the body and therefore will likely replicate any existing abnormalities<sup>10,11</sup>.

- Only a few diseases can be treated with stem cells and there are limitations<sup>10,11</sup>;
- If a baby is born with a genetic disease the stem cells from that baby cannot be used because they will have the same genes that caused the disorder
- A child's cord blood stem cells are not used to treat that child's leukemia in the vast majority of cases of childhood leukemia. However stem cells from a donor may be able to be used as long as there is a match; as with bone marrow when it is a source of stem cells. More mature sources and matched stem cells provide the possibility of greater control of the leukemia and are frequently favoured by stem cell transplant services, even when the child may have their own cord blood stem cells stored.
- Parents need to be aware that many diseases cannot be treated with a person's own stem cells.
- Parents need to be aware that the child's own stem cells (autologous cells) being used for the treatment of cancer is remote. This uptake is estimated at approximately 1 in 30,000.
- Parents also need to be aware that the use of their child's own cells to treat existing conditions such as diabetes and cerebral palsy is as yet unproven.
- Emerging research may identify new ways of generating stem cells from an individual that does not involve umbilical cord blood stem cells.
- There is great evidence of long term viability of stored cord blood. The number of cells collected however is fixed and is likely to be insufficient to support a stem cell transplant for an adolescent or adult.
- Parents electing to have their child's cord blood collected and stored need to be aware of the volume and number of stem cells collected, as small volumes may be insufficient to support even older children, let alone adolescent and adults.
- Discussion may include information regarding maternal infectious disease and genetic testing, issues with poor quality units of umbilical cord blood, and that all demographic baby data will be retained.

Parents need to consider:

- What will happen to the cord blood if the private bank goes out of business?
- The cost of the collection fee and the annual ongoing storage fee.
- Current collectors' policy is that cord blood is discarded if payments from the parents cease.

### Public Cord Blood Services:

New Zealand public bone marrow stem cell transplant centres are affiliates of the stem cell and international bone marrow network which allows access to registries and public cord blood banks if required<sup>12</sup>. If required for any treatment this cost is covered within the public health system of New Zealand.

In rare circumstances a family may have a child affected by a condition such as cancer where there may be benefit of collection of cord blood from a sibling. In these rare instances the New Zealand Blood Transfusion Service provides this service of harvesting cord blood from the sibling at birth free of charge<sup>13</sup>. This needs to be discussed with a specialist at least 3 months before the birth.

### Informed Decision Making:

If parents request that cord blood be harvested after the above information is shared and understood by them, NZCOM recommends that cord blood collection is undertaken preferably by an appropriately trained person who does not have direct responsibility for mother and baby during the 3rd stage of labour.

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### **Bibliography:**

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### **Ratification:**

*This statement was ratified at the NZCOM AGM on 14 August 2013*

The purpose of New Zealand College of Midwives Consensus Statements is to provide women, midwives and the maternity services with the profession's position on any given situation. The guidelines are designed to educate and support best practice. All position statements are regularly reviewed and updated in line with evidence-based practice.