

Are dual cord blood banks the answer to increasing stem cell demand?

Demand for stem cells from cord blood is greater than supply. In this week's BMJ, two senior doctors, Professors Nicholas Fisk and Rifat Atun, analyse the UK's growing cord blood banking industry and the potential impact of a new bank that provides blood for both personal and public use.

Umbilical cord blood is rich in stem cells that can be used in a way similar to bone marrow to treat diseases such as childhood leukaemia. In future, it might also be used to repair damaged tissues in a range of diseases such as strokes, heart attacks, kidney failure, and diabetes.

Cord blood banks generally fall into two groups. Public banks collect cord blood which has been altruistically donated at birth and the blood is available to everyone. The value of public banks is now well established, but currently only a handful of UK hospitals collect cord blood for the public bank and coverage is insufficient to meet demand.

In contrast, commercial (private) banks offer parents the chance to store their child's cord blood as biological insurance, in case it is needed to treat some future disease in the child or close family member. Customers typically pay £1500 for a 20-25 year service, but the chances of the blood being used are very small and these banks have been opposed by numerous medical bodies.

Private banks also raise serious resource issues for the NHS and are at risk of corporate failure.

Virgin recently introduced the concept of dual public-private banking. Virgin Health Bank stores 20% of the sample for private use and 80% for public use and uses some of the proceeds to support stem cell research.

In this way, Virgin has addressed the impasse between parents' desire to store their baby's cord blood and the unmet need for public banks, say the authors. Nevertheless, Virgin's service still has many of the core disadvantages of private banking.

To succeed, Virgin will need to get the support of midwives and obstetricians who collect the blood and advise prospective customers, they write. The logistics of collection must also be streamlined to minimise burden on staff.

The charitable intent and public provision may help overturn entrenched professional opposition to commercial banking, say the authors, but fears about risks of private sector involvement in cord blood banking remain high.

These need allaying through greater transparency, strict regulation of financial practices, and greater accountability to public sector bodies through an appropriate regulatory framework, they conclude.

Source: British Medical Journal

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