

## Do We (Healthcare Professionals) have enough knowledge regarding Cord blood banking in present scenario?

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### Abstract

**Introduction:** Health care professionals (Doctors, midwives, nurses, health workers) are the key source of information about cord blood banking for parents those who interested to bank. They have an important role in providing accurate, unbiased, evidence-based information about cord blood banking. To provide accurate information, they should have evidence-based knowledge on cord blood banking. Present study is conducted to explore the knowledge about cord blood banking in healthcare professionals.

**Aims & Objectives:** Aim is to find the awareness among healthcare professionals about the UCBB (Umbilical Cord Blood Banking) and its benefit and affordability by its longevity or viability in recent period.

**Materials & Methods:** A cross-sectional study is conducted among 100 health care professionals; who attended OP clinics of ObG and pediatrics in NRI medical college and general hospital, using questionnaire with total questions of 20. Results were tabulated and analyzed by chi-square test.

**Results:** Among 100 health professionals, 67% were aware of UCBB and remaining (33%) were unaware, where the advertisements are being the most common source. Among 67% aware health professionals, 20% (14) people were telling expensive but affordable and 62% (41) about useful but not necessary now. Out of 33% people, 23% people were agreeing that it is very useful and 60% expensive.

**Conclusion:** Present study indicates more information is required to healthcare professionals with respect to knowledge, awareness, concerns in collection and storage of cord blood and to identify gaps existing, so that accurate advice to expectant parents be given to aid their decision.

**Keywords:** Umbilical Cord Blood Banking (UCBB), Healthcare Professionals.

### Introduction

Umbilical cord blood is the blood that remains in the placenta and in the attached umbilical cord after childbirth. Cord blood is an easy source of stem cells, which can be used to treat hematopoietic and genetic disorders. An increasing number of parents who are getting information of cord blood banking and its benefits from their antenatal care provider viz., health workers. Healthcare Professionals have an important role in providing accurate, unbiased, evidence-based information related to cord blood banking in turn help those parents who are interested to store their child's cord blood. To meet this public expectation, health care professionals should have evidence-based up to date knowledge.

The aim of the present study is to know the knowledge of Health professionals, regarding cord blood banking, its benefit, whether it is practically feasible or not.

### Material & Methods

The study was conducted in a tertiary level teaching hospital, NRI medical college and general hospital over one year period from Dec 2015 to Nov 2016, with ethical committee approval. Our study is a cross sectional study consisted of 100 health

professionals attending out-patient and inpatient care in O&G and Pediatrics depts. Information related to current subject was collected based on questionnaire containing 20 questions such as Age, sex, education, socio economic status, what is cord blood, its use, cost, longevity, viability, information from organization or advertisement etc.

**Inclusion criteria:** Health professionals other than general public.

**Exclusion criteria:** 1. Blood bank professionals.

**Statistical Analysis:** Results are tabulated and analyzed based on chi-square test.

### Results

During our study period, 100 health professionals (Doctors, nurses, midwives, health workers), doing job in our institution and those attended our OP / IP clinic, were questioned using questionnaire containing 20 total questions prepared by us. Among 100 health professionals, 67% were aware of UCBB and remaining (33%) were unaware, for the aware group media information and advertisements came to be the most common source of information. (Table 1)

**Table 1: Distribution of health professionals according to awareness**

Type of Population	Number of People	Aware of cord blood banking %
Health Professional (n=100)	Yes 67	67 %
	No 33	33 %
Total	100	

Among 67% aware health professionals, 20% (14) feel it is expensive but affordable and 62% (41) felt it is useful but not necessary now. Out of 33% people, who said unaware also have some knowledge related to UCBB, among them 23% people were agree that it is very useful and 60% expressed expensive. (Table 2)

**Table 2: Distribution of health professionals according knowledge on cord blood banking**

Health Professional (n=100)	Awareness	In number (n)	In Percentage (%)
Aware (n= 67)	Very useful	12	18
	Expensive but Affordable	14	20
	Useful But Not Necessary	41	62
Unaware(n=33)	Very useful	7	23
	Expensive	20	60
	Useful But Not Necessary	6	17

## Discussion

Health care professionals (Doctors, midwives, nurses, health workers) are the key persons to deliver information about cord blood banking to parents, who are interested to store cord blood. To fulfill parent's expectations, they need to have evidence-based knowledge on cord blood banking in order to provide expectant parents with accurate and un-biased information to facilitate their decision making choice regarding cord blood donation or private banking. In our study, even in less (33%) people were unaware about cord blood banking most of them (23%) have known that it is very useful and 60% have knowledge about the cost. Whereas, most aware people were agree that even it is very useful, not necessary to store now and also having no knowledge about the longevity of cord blood. Our study has shown that, despite lack of clear cut recommendations many health professionals have sound knowledge on cord blood banking, but differing levels of confidence in them, regarding this knowledge. Hence need for guidelines and information related to the issue from health bodies run by local government.

Our study when compared to two other studies available, where although knowledge of doctors on this topic was reasonable, several areas were identified for improvement.<sup>(1,2)</sup> In other studies, it was reported that most nurses had low knowledge levels of cord blood and stem cell collection and uses.<sup>(3)</sup> One study on attitudes of midwives in relation to the impact of cord blood collection for donation by Duffy and colleagues, revealed that midwives were aware that cord blood was used in the treatment of haematological disorders but only two thirds were aware of other indications for use such as autoimmune disorders, degenerative conditions and genetic diseases.<sup>(4)</sup> Whereas, Hatzistilli and colleagues, reported that just over half the midwives could provide correct responses regarding the collection, storage and use of cord blood.<sup>(5)</sup> In another study by Moustafa and Youness, reported that most maternity nurses in their study had inadequate knowledge of cord blood banking.<sup>(6)</sup>

## Conclusions

More studies are required to know healthcare professionals' knowledge, awareness concerning the collection and storage of cord blood and to identify gaps which exist in knowledge and practice so that they will help the expectant parent to take accurate decision.

Need for guidelines and information related to the issue from health bodies and organizations run by local government.

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