

Background

There are 5,500,000 births each year in the United States and Canada combined and 140,000,000 births each year worldwide. Of these, umbilical clamps are used in approximately 112,000,000 births each year. Every birth makes use of two traditional umbilical clamps, a plastic clamp closest to the baby and a stainless steel clamp closer to the mother. Attendant with cutting the umbilical cord is a risk of blood contamination to health care workers.

With the advent of birthing rooms and the ungowning of obstetrical personnel, birthing is becoming more users friendly. However, the risks to obstetrical personnel of infection with HIV or Hepatitis B have never been greater.

The World Health Organization estimates there are 20,000,000 HIV or AIDS cases worldwide currently with an additional 6,000 people being infected with HIV each day. Hepatitis B currently infects over 2,000,000,000 people and accounts for 1,000,000 deaths each year.

Exposure Issues

It's estimated that more than 6.2 million Americans are infected with HIV, Hepatitis B or Hepatitis C. Source: Centres for Disease Control and Prevention Publication, Vol. 23, No. 3, Sept. 1994

Exposure Risks:

- 96% of clinician respondents have been exposed to umbilical cord blood.
- 84% of respondents are concerned about exposure to umbilical cord blood.
- 39% of vaginal deliveries expose at least one healthcare worker.
- 50% of caesarean deliveries expose at least one healthcare worker.
Source: UTMD Market Research, 1994; American Journal of Ob/Gyn 1992, 167:703-8

"All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering and generation of droplets of these substances." Source: OSHA Regulations on Bloodborne Pathogens, #1910. 1030, Federal Register, Vol. 56, No. 235.

The World Health Organization (WHO) has emphasized in three recent publications regarding childbirth, various relevant recommendations on newborn healthcare procedures, including the treatment of the Umbilical Cord:

1. W.H.O: Care of the Umbilical Cord. A review of the evidence, 1999.
<http://www.who.int/rht/documents/MSM98-4/MSM-98-4.htm>
2. W.H.O: Recommended practical guidelines in Normal Birth Care, 1999.
<http://www.who.int/rht/documents/MSM96-24/msm9624.htm> in particular, chapters 5.5; 5.6; 6.1; 6.3.
3. W.H.O: ESSENTIAL NEWBORN CARE, Report of the technical Working Group (Trieste, 25-29 April 1994): cleanliness, clean delivery and clean cord care for

prevention and control of nosocomial, newborn and hospital infections - mother and child:

http://www.who.int/rht/documents/MSM9313/essential_newborn_care.htm

(Sizes of pages mentioned are of A4 paper size).

In two articles; "Care of the Umbilical Cord. A review of the evidence" <http://www.who.int/rht/documents/MSM98-4/MSM-98-4.htm> and " Recommended practical guidelines in Normal Birth Care"

<http://www.who.int/rht/documents/MSM96-24/msm9624.htm> the authors, and the conclusions and recommendations, state that **cutting of the cord should take place with a sterile disposable instrument**, or thoroughly decontaminated by sterilization. **This is of utmost importance for the prevention of infections.** Although no attendant in practice will admit to the use of non-sterile devices during childbirth, it may happen from time to time that in the absence of sterile scissors, they may use previously used episiotomy scissors.

In "Care of the Umbilical Cord" Page 12

<http://www.who.int/rht/documents/MSM98-4/MSM-98-4.htm> "Timing of cord clamping" end of paragraph: **"The cord should be shielded with a sterile covering to minimize blood spraying during the procedure."** In Page 4, "Importance of cord care"; "In developed countries, individual cases and epidemics of cord infections continue to occur, even in supposedly aseptic nurseries for newborns. Neonatal tetanus and cord infections continue to be an important cause of neonatal morbidity and mortality in developing countries."

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<http://www.who.int/rht/documents/MSM96-24/msm9624.htm> the authors, and the conclusions and recommendations, state that **early or relatively early clamping of the cord is mandatory after oxytocin administration is practiced.** The reason for this statement is to avoid the transfer of different drugs, (administered to the mother during childbirth), to the newborn via the Umbilical Cord. The practice of administering drugs to the mother during childbirth is common in most developed countries. In developing countries or home childbirth, when no drugs are used, it is suggested that clamping be delayed, even until cessation of peristaltic movements in the cord.

In ESSENTIAL NEWBORN CARE, Report of the technical Working Group, Page 5 http://www.who.int/rht/documents/MSM93-13/essential_newborn_care.htm, in

"The essential newborn care interventions are: 1. **Cleanliness: clean delivery and clean cord care for the prevention of newborn infections (tetanus and sepsis)**".

In "Care of the Umbilical Cord. A review of the evidence", page 13

<http://www.who.int/rht/documents/MSM98-4/MSM-98-4.htm> in "Length of the cord stump" the authors recommend **clamping the cord 3-4 cm clear of the abdominal wall to avoid pinching the skin or clamping a portion of the gut which, in very rare instances, may be inside the cord.** As a safety procedure, it is recommended to leave a stump of at least 4cm when using ClampCut; the Umbilicus of 4cm is within the range suggested by WHO.