The language we use to talk about transmission of the human immunodeficiency virus (HIV) is likely to have considerable effect on what we decide to do about it. A typical statement on the issue, found in the UNICEF Fact Sheet on HIV and Infant Feeding (www.unicef.org/pubsgen/hiv-infantfeeding/hiv-infantfeeding-eng.pdf), published in September 2002, is:

“The risks of HIV infection have to be compared with the risks of illness and death faced by infants who are not breastfed.”

What does this really mean?

Point 1: The first part of the sentence should be about the risk of illness or death. If it were about the risk of transmission of the virus, there would not be any sensible way to compare it with the risk of illness and death highlighted in the second part of the sentence. Thus, the sentence really should be:

“The risks of ILLNESS AND DEATH DUE TO HIV infection have to be compared with the risks of illness and death faced by infants who are not breastfed.”

Point 2: However, some HIV infections in infants are believed to occur during pregnancy or during the birth process. Thus the statement should be:

“The risks of illness and death due to HIV infection RESULTING FROM BREASTFEEDING have to be compared with the risks of illness and death faced by infants who are not breastfed.”

Point 3: There are various methods of breastfeeding (e.g., exclusive breastfeeding, wet-nursing, scheduled vs. on demand feeding), and various types of replacement feeding (e.g., using commercial formula, homemade formula, expressed and treated breastmilk from the mother, banked breastmilk). It is more precise to say:

“The risks of illness and death due to HIV infection resulting from PARTICULAR METHODS OF breastfeeding have to be compared with the risks of illness and death faced by infants who ARE FED WITH PARTICULAR METHODS OF REPLACEMENT FEEDING.”

Point 4: These risks may be different in different circumstances, depending on environmental conditions, the use of pharmaceuticals or illicit drugs, support services, and a host of other factors. Thus:

“The risks of illness and death due to HIV infection resulting from particular methods of breastfeeding have to be compared with the risks of illness and death faced by infants who are fed with particular methods of replacement feeding IN PARTICULAR KINDS OF CIRCUMSTANCES.”

Point 5: The statement should specify the indicators to be used to compare the risks. It is often useful to make comparisons in a holistic and impressionistic way. However, for a more analytic approach, comparisons should be made on only one dimension at a time. For example, survival rates at five years of
age could be compared, or the number of cases of particular kinds of diseases, such as diarrhea, in defined time spans. If we focus on mortality, we could say:

“The risk of DEATH BY FIVE YEARS OF AGE due to HIV infection resulting from particular methods of breastfeeding has to be compared with the risk of DEATH BY FIVE YEARS OF AGE faced by infants who are fed with particular methods of replacement feeding in particular kinds of circumstances.”

We could track the infants to age five, and report the percentage of infants using each feeding method who survived. If the sample studied is representative of a larger population, these figures could be used to estimate the probability of survival with each feeding method in that population. A mother in these circumstances would most likely choose the feeding method that seemed to offer the best prospects for survival, as indicated by these data.

**Point 6:** The UNICEF statement was concerned about the risk of death resulting from HIV transmission through breastfeeding. However, infants can also die from HIV transmission during pregnancy or the birth process, and from causes other than HIV. For the mother who needs to choose among different feeding methods, there is no reason to give more attention to deaths caused by HIV infection through breastfeeding than to deaths from other causes. Thus the statement could be reformulated as follows:

“The risk of death resulting from particular methods of breastfeeding has to be compared with the risk of death resulting from replacement feeding in particular kinds of circumstances.”

There is no reference here to the infant’s HIV status. HIV infection status can be viewed as an intervening variable, not an outcome variable. It can be used as a surrogate marker for health outcomes if and when (a) actual health outcomes cannot be determined readily, and (b) the association between HIV infection status and health outcomes is well known. For the purpose of this discussion, it is assumed that actual health outcomes (such as survival rates at five years of age) can be known directly.

Knowing the infant’s HIV infection status may help to explain some deaths, but that knowledge would not be important to the mother who simply wants to know which choice of feeding methods would lead to the best likelihood of survival. The question of why the deaths occur can be left to the scientists. Mothers need to know that the deaths occur with a particular probability with one method of feeding and a different probability with another method of feeding. It is this difference that matters. Very little research has been done to assess the difference in likely health outcome with different methods of feeding in the context of HIV/AIDS.

**Point 7:** On the basis of all these considerations, the sentence would have been clearer and more useful if it had been written this way:

“To help HIV-positive mothers choose a feeding method, it is important to compare the likely impacts on the infant’s health status of different methods of feeding in different kinds of circumstances.”

This way of framing the issue would lead policy and research in directions that are quite different from those suggested in UNICEF’s formulation. For the mother who must make a difficult choice, it is more important to know what outcomes are likely with different choices than to know why.

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