Cow´s Milk for Infants –When to Start With? The Austrian Way of Evidence-Based Decision Making

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Background

The recommendations about cow's milk for infants vary widely between countries for the optimal timing, even within German speaking countries. According to the WHO there is no reason for a restriction of cow's milk starting from the age of 6 months. In Austria the official recommendation for the use of cow's milk for infants starts with 1 year. In 2008, the Ministry of Health in collaboration with the Austrian Agency for Health and Food Safety and the Main Association of Austrian Social Security Institutions started a new health promoting project to find dietary guidelines for pregnant women, breastfeeding mothers and infants up to the age of 3 years. An evidence-based, systematic review about the use of animal milk (particularly cow's milk) within the first 12 months of age was initiated in September 2010 to update the recommendation. The systematic review showed a lack of evidence for a possible risk of diabetes type 1, gastrointestinal problems or other outcomes (growth, development, allergy means asthma or eczema) when feeding cow's milk to infants starting from 6 months of age.
There were few studies with a trend to iron deficiency anaemia, but the level of evidence was low and many studies were not of good quality. Despite of this low evidence, some decision makers tend to recommend not using cow's milk within the first 12 months because a threshold for a safe dosage for vulnerable infants could not be determined. A consensus has not been obtained yet (see Figure 1).

Fig. 1: The Evidence-Based Decision Making Process from September 2010 up to July 2012

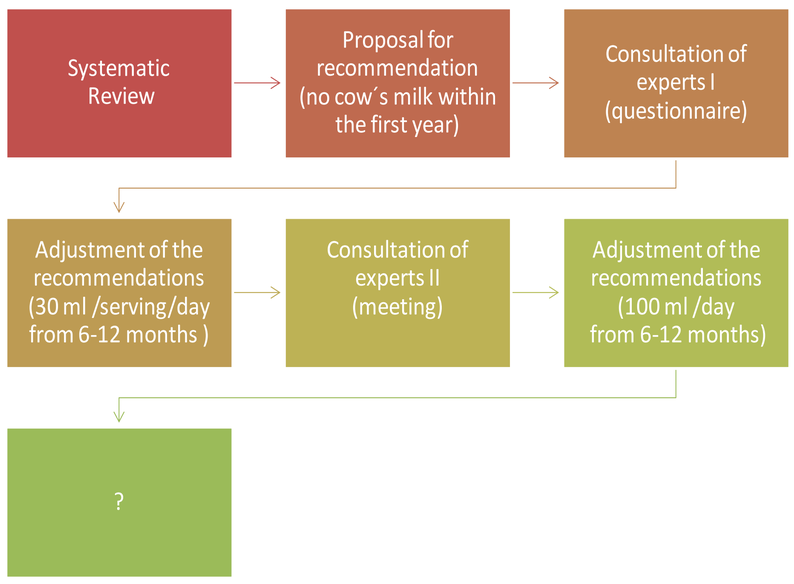
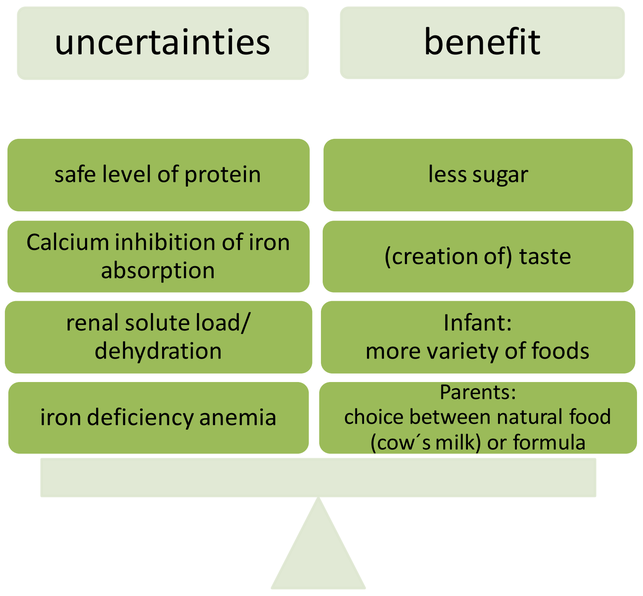


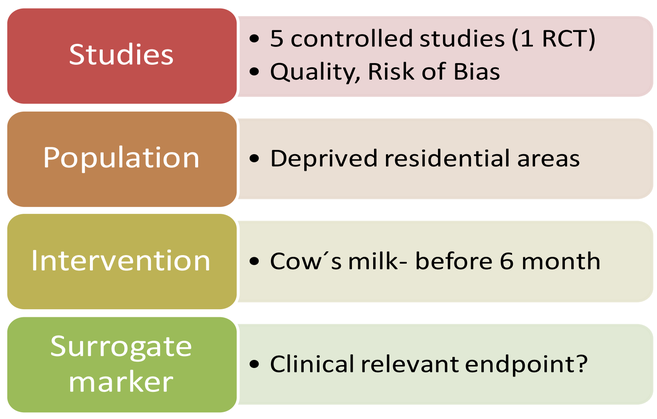
Fig. 2: Balance Sheet of Consequences: Cow´s Milk after 6 Months



Decision Analysis

Multiple options require judgements and decisions whether the anticipated desirable consequences outweigh the undesirable ones. A porridge using cow's milk instead of formula once a day would provide less sugar and more variety of natural foods for infants. Uncertainties like a safe level of protein, calcium inhibition of iron absorption, renal solute load and iron deficiency anaemia were discussed (see Figure 2). The external validity of the results is questionable concerning the study population, intervention and outcome (example see Figure 3). However, there is insufficient evidence to determine for sure whether it is potentially harmful or not.

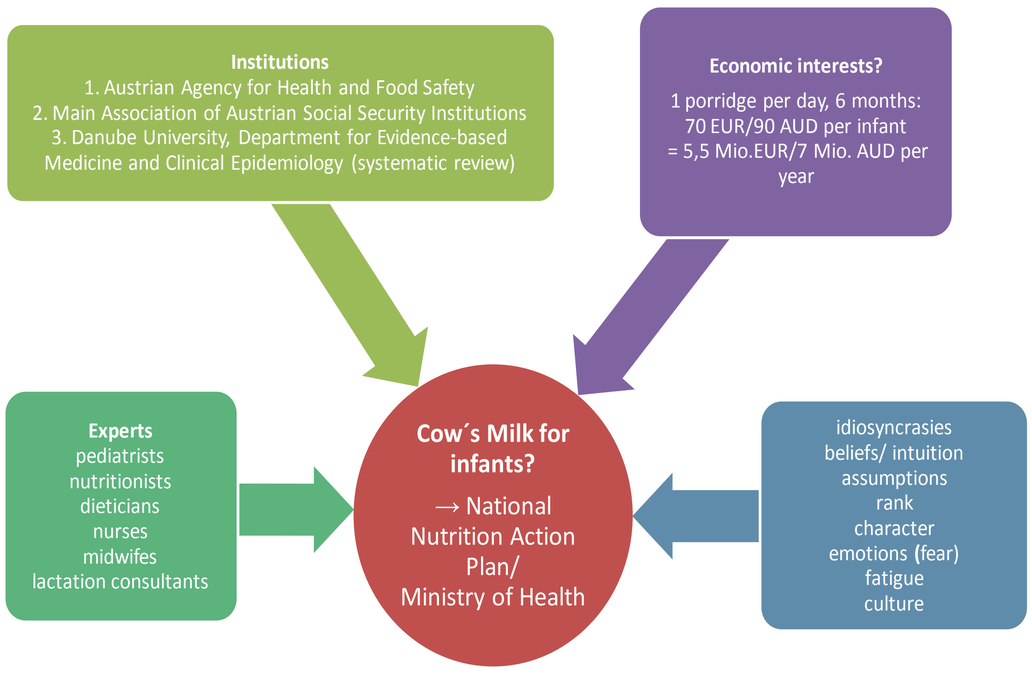
Fig. 3: The Uncertainty of Evidence, Example Iron Deficiency Anemia



Other Influences on the Decision-Making

Decision-making under risk and uncertainty is not only a cognitive, but also an emotional process. After evaluating the consequences, prospective emotions like fear can arise and influence choices, actions and risk perception.
A consensus was very elusive because a lack of confidence was caused by a lack of transparency in the informal consensus process subsequent to the evidence research. This process was influenced by idiosyncrasies of small sized group interactions, existing beliefs, intuition/ assumptions and maybe economic interests (see Figure 4). Factors like fatigue, lack of expertise in methods, rank and character of members and dominance by individuals threatened the integrity of the process. Due to these circumstances, the panellists could not contribute equally.
The ability to accurately interpret and act on information about risk, to choose confrontation or risk avoidance is also influenced by culturally-based preferences. These preferences can guide decisions on an international level.

Fig. 4: Influences on the Decision-Making



Latest suggestion, ongoing Process

•**Accepted**: No cow´s milk before 6 months, no cow´s milk as beverage before 12 months.
•**No Consensus**: From 6 to 12 months: 100ml cow´s milk per day as yogurt or porridge with cereals and diluted milk (1:1).

Conclusion

Judging the evidence, translating science into every day language and balancing aims and interests is a challenge. A formal consensus with a specific organizational structure can minimize emotional influences and systematic biases and should therefore be preferred.
Since the evidence is insufficient or controversial, the Main Association of Austrian Social Security Institutions prefers a common solution for the German speaking countries: increasing cow´s milk from 100 ml to 200 ml with 8 months. Anticipation of potentially negative consequences is not evidence-based and may cause public health problems instead of resolving it.
A Ministry of Health should provide objective, balanced, unbiased information about potential chances or documented risks for the population. In case of controversial experts opinions, the Ministry – an institution under public law – is expected to provide money for risk monitoring (register, statistics, research).

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