

### Implications to Practice

- Nurses and doctors need to be educated on feeding practices for newborns and the effects they have on both mom and baby.
- Research has shown there is a correlation between formula-fed infants and hospitalizations due to infections.
- Breastfeeding practices have shown to reduce occurrences of fever, acute respiratory infections, and other childhood illnesses in children.
- It is important for doctors and nurses to educate mothers on breastfeeding and the benefits.
- Statistics should be provided to mothers when deciding the best feeding option and practices to use.
- Mothers need educated on the numerous benefits breastfeeding has on both mom and baby.
- Health promotion and education is key.

### Cohort Study

#### Purpose

- \_The purpose of this study was to evaluate the association between feeding practices and hospitalizations due to infections.

#### Reliability and Validity of Information

- Cases were selected at random and included those that stayed at least 24 hours in the hospital. The infants were between 3 days old and 6 months of age.
- The two groups were treated equally. A questionnaire was used for both groups, along with the patient's medical charts for reliable information for the study. The mothers were asked questions regarding the type (breastmilk or formula) and frequency of the feedings.
- Cases were compared based on populations including gender, birth weight, age, maternal education, and location of delivery.

#### Results

- The main results showed that exclusive formula feeding was associated with increased rates of hospitalizations in regards to infections (pneumonia, diarrhea, sepsis, etc.)
  - 47.1% of the 191 infants, had pneumonia
  - 28.8% of the 191 infants, had neonatal sepsis
  - 15.7% of the 191 infants, had diarrhea.
  - 8.4% of the 191 infants, had other illnesses associated with infections

#### Conclusion

- The results of the study significantly showed that exclusive formula feeding has an increased risk of infections and hospitalizations in infants less than 6 months of age. Breastfeeding is highly beneficial and can prevent these infections and hospitalizations.

# Breast Feeding vs Bottle Feeding Effecting the Amount of Hospitalizations in the First Year

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### PICOT Question:

In newborns, how does breastfeeding compared with formula- feeding influence infections/ hospitalizations and morbidity/mortality rates over the first year of the child's life?

Breastfeeding is the only natural form of feeding for an infant. There are other options for children such as formulas. Some experts argue that formula do not have the best nutrients for a child. Mothers still choose formulas when they are educated on the facts of breastfeeding. Breastfeeding does not only help with bonding with the mother but it passes immunity properties to the child. Infants are born with a low immune system but if they are fed breast milk they have a lower risk for infections. Formula is a fine choice for feeding a child but it will not help the child by lowering infections. More information needs to be spread to mothers so they can make an educated decision on which way to feed their infants.

### Why is this a problem?

- Infections can be a serious complication for an infant's health.
- Infants who contract infections in the early stages of life are more susceptible to longer hospital stays and multiple antibiotic uses.
- Breastfed infants have less infections which can help them not get as many when they get older.
- Young child hospitalizations can led to hospital acquired infections which could be prevented by immunity properties given through breast milk.
- Infections in a child can be as serious as death.
- Experiences for children in a hospital setting can be a traumatic experience because they do not understand why it is happening, they believe they are being punished
- Mothers are not getting the correct information about why breastfeeding is the optimal choice for their children.
- Children who were born prematurely or who were born with congenital abnormalities are at greater risk for infection, and needed to be given any precautions available.

### References

- Hengstermann, S., Mantaring, J. B. V., Sobel, H. L., Borja, V. E., Basilio, J., Iellamo, A. D., & Nyunt-U, S. (2009). Formula Feeding Is Associated With Increased Hospital Admissions Due to Infections Among Infants Younger Than 6 Months in Manila, Philippines. *Journal of Human Lactation*, 19–25. doi: 10.1177/0890334409344078
- Yamakawa, M., Yorifuji, T., Kato, T., Inoue, S., Tokinobu, A., Tsuda, T., & Doi, H. (2015). Long-Term Effects of Breastfeeding on Children's Hospitalization for Respiratory Tract Infections and Diarrhea in Early Childhood in Japan. *Maternal & Child Health Journal*, 19(9), 1956–1965.

### Recommendation for practice change:

- More clinical studies need to be conducted to obtain more evidence over breastfeeding and lowered infections rates. This is because there is still a large percentage of mothers not breastfeeding their children and they are contracting several infections because of it. If more clinical studies were made there could be more evidence to show expected mothers the benefits to breastfeeding. Having more information readily available for expecting mothers may help them understand why breastmilk is the only choice to help protect their babies from infections. Some mothers may not have the choice to breastfeed because of certain reasons. They should be given the option to opt out on the information being given. I recommend that more studies be conducted in the US and be conducted on all different types of mothers. This way every mother can see why it benefits them and their child.

### Cohort Study

#### Purpose

- The aim of this study was to determine if the protective effects of breastfeeding reduce hospitalizations for respiratory tract infections, diarrhea, and other infections in early childhood in Japan. The research question was if breastfeeding provided long-term protection from infection and disease.

#### Reliability and Validity

- Questionnaires were distributed to a randomly selected population on infants born between the 10th and 17th of January and July in Japan. The questionnaire started at 6 months of age and ended and continued follow up questionnaires through 12 months of age.
- The study was retrospective and used complete existing data from the past over a course of time and identified trends that were evident throughout the use of STATA SE analysis.
- The study treated both breastfed and formula fed groups equally in their reporting. There was no apparent evidence in the study that identified favor to one side more than the other. .

#### Results

- The results were clinically significant and indicated that exclusive breastfeeding may decrease the likelihood of acquiring an infection that requires hospitalization in infants the longer it is performed:
  - Exclusive breastfeeding had an increased likelihood of 1.4% for diarrhea and 1.1% for respiratory infections
  - Exclusive bottle feeding had an increased likelihood of 2.2% for diarrhea and 2.6% for respiratory infections
  - There is a statistical significance of that breastfeeding can reduce the risk of hospitalizations long-term even beyond the 1st year with a significance value of 0.20

#### Conclusion

- In conclusion, the study shows that there is a significant increase in the likelihood that breastfeeding will decrease the risk of infection and hospitalization within the first year of life. There is significant data proving that there are long-term protective effects associated with the breastfeeding the longer that exclusively breastfeeding is performed.

