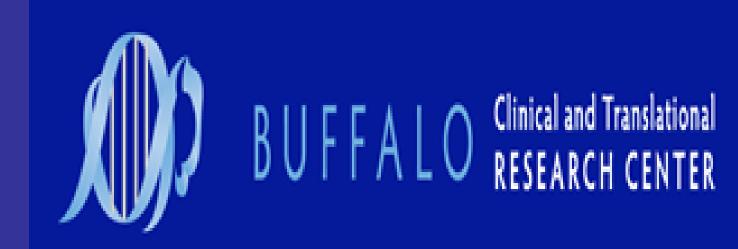
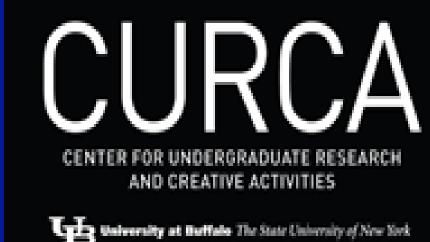
# Predictors and Consequences of Breastfeeding

Research Assistants: Arsh Issany, Leah Novo, Faria Nateghi Hareh Dasht; Principle Investigator: Xiaozhong Wen MD, PhD





Division of Behavioral Medicine, Department of Pediatrics, Jacobs School of Medicine and Biomedical Sciences, State University of New York at Buffalo

#### Our aim was to identify significant predictors and consequences of breastfeeding.

- We used data of 20 pairs of mother-infants from UB Pregnancy and Cessation Study (2015-2017, Buffalo, NY).
- In our sample 59% of mothers initiated breastfeeding after delivery.
- Cigarette quitters during pregnancy had higher breastfeeding rate (75% vs. 20%) than continuous cigarette smokers.
- Older women were more likely to breastfeed (73% among aged ≥25 years vs. 33% among aged ≤24).
- Those with education of some college or higher were more likely to breastfeed (80% vs. 29%) than those with high school or lower.
- Breastfeeding rate was higher among those with ≥ \$12,000 annually income (75% vs. 44%) than those with <\$12,000.
- In conclusion smoking cessation, older age, higher education and income are associated with higher breastfeeding initiation rates.

### Introduction

Abstract

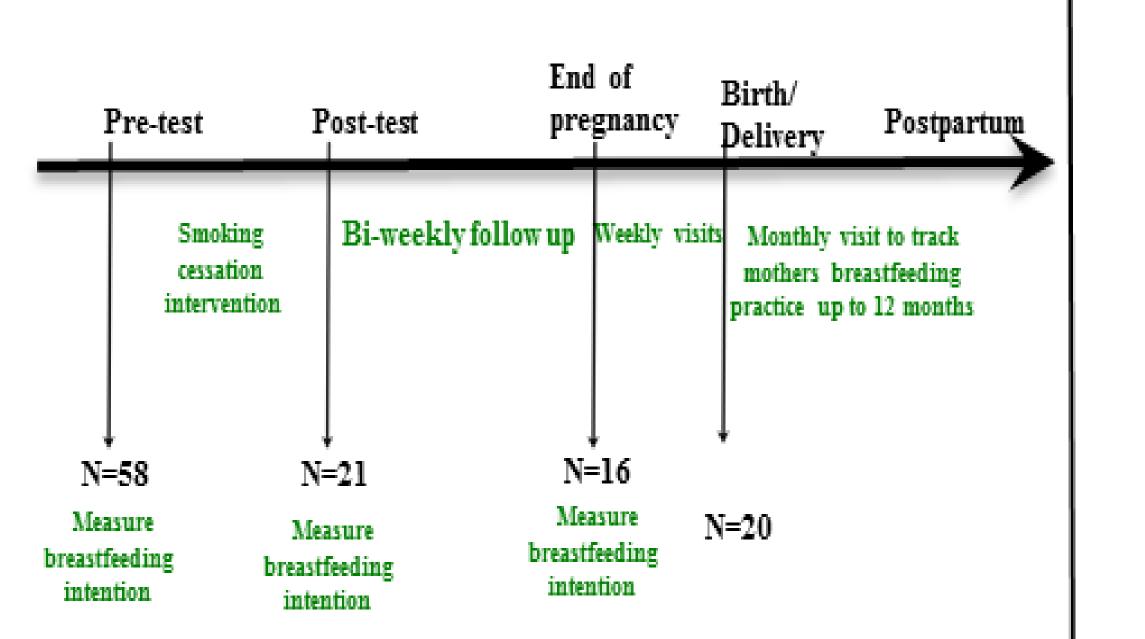
- Breastfeeding has numerous health and emotional benefits to the mother and her infant. It has many nutrients, vitamins, and minerals to protect the baby against illnesses. Breastfed babies also quickly develop a strong bond with their mother, and breastfeeding mothers lose the baby weight faster.
- Smoking pregnant women are a high risk population with a low breastfeeding initiation and shorter breastfeeding duration.
- Our study is to identify significant predictors and consequences of breastfeeding among smoking mothers



## Hypothesis

- Smoking quitters have a higher percentage of breastfeeding and a longer breastfeeding duration
- Women with higher age, education and household income have a higher possibility for breastfeeding.
- Breastfed infants are less likely to be sick than formula-fed infants.

### Methods



### **Predictors of Breastfeeding**

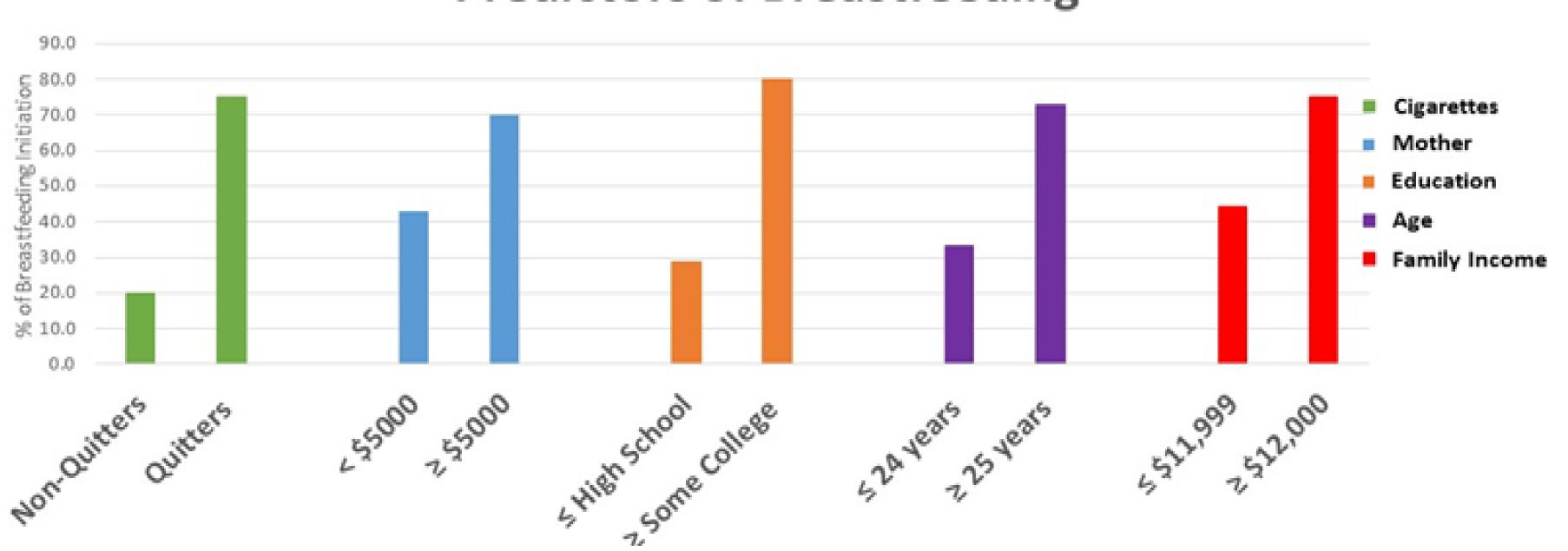


Figure 1. The significant predictors of breastfeeding initiation among our sample.

Feeding Type at Discharge

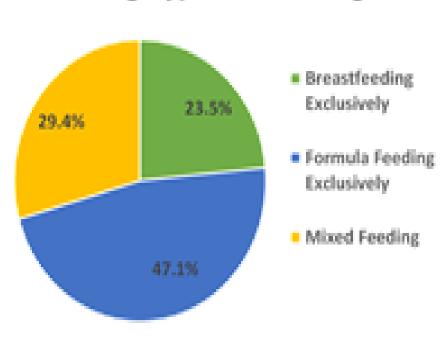


Figure 2. Most of the mothers in our population were feeding their infants formula right at the time of discharge from the hospital.

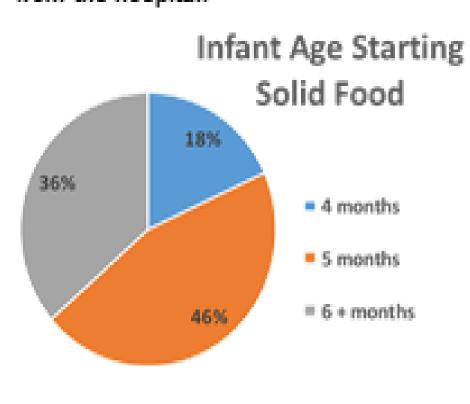


Figure 3. Most of the mothers in our population started incorporating solid food into their infant's diet around five months.



### Postpartum Sample (N=20)

Characteristic	N(%)
Race	
Non-Hispanic Caucasian	6(31.6)
Non-Hispanic Black	10(52.6)
Other	3(15.8)
Age	
≤24 years	7(36.8)
25-29 years	4(21.1)
≥30 years	8(42.1)
High School or lower education	8(42.1)
Employed	5(26.3)
Married	6(31.6)
# Cigarettes/Day at Enrollment	
1-4	3(14.3)
5-9	8(40.0)
≥10	9(42.9)
Quit Smoking	15(75.0)
Gestation Age at Enrollment	
1-13 weeks	7(33.3)
14-27 weeks	11(55.0)
≥28 weeks	2(10.0)
Annual Household Income	
≤\$11,999	10(52.6)
Mother's Annual Income <\$5,000	8(42.1)

Table 1. Our sample is a low socioeconomic population.

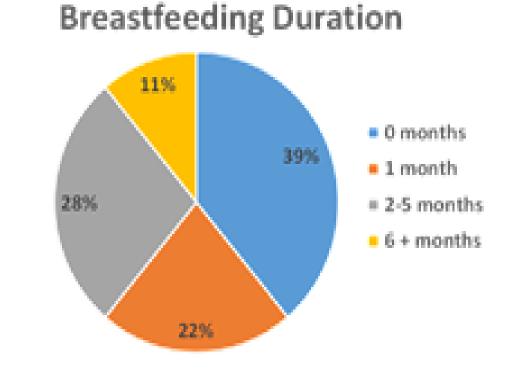


Figure 6. Most of the mothers in our population breastfed for less than one

#### Exclusive Breastfeeding Duration

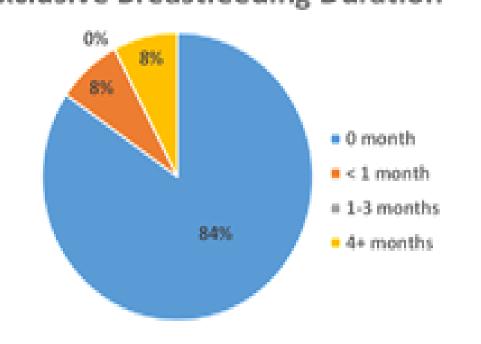


Figure 4. Most of the mothers in our population did not breastfeed exclusively.

#### Infant Age Starting Formula

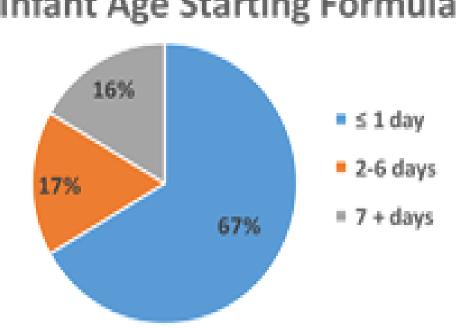


Figure 5. Most of the mothers in our population started their infants on formula immediately.

Conclusion

- Older age, higher education, and higher household income predict a higher breastfeeding initiation rate.
- Quitters in our study had a similar breastfeeding initiation rate similar to the national average (75% vs. 81%), which is much higher than the non-quitters in our study (20%).

### **Future Works**

- We are in the process of analyzing the data on the consequences(i.e. illness, allergy, crying, sleep) of breastfeeding.
- This preliminary data strongly supports the rationale of incorporating breast feeding education into a smoking cessation program.

### Acknowledgements

Collaborators: Leonard H. Epstein, Stephen T. Higgins, Rina D. Eiden, Faye E. Justicia-Linde, Youfa Wang, Kai Ling Kong, Rocco A. Paluch.

Research Assistants.

Health professionals at recruitment sites.

All patients and their families.

## Funding

NIH CTSA Pilot Fund; UB Dept. of Pediatrics, CURCA

### References

Federico, G., Gori, M., Randazzo, E., & Vierucci, F. (2016, December 09). Skin advanced glycation end-products evaluation in infants according to the type of feeding and mother's smoking habits

De, A. J., Kaur, M., Gonseth, S., Endicott, A., Selvin, S., Zhang, L., . . . V/lemeis, J. L. (2017, April 01). Correlates of Prenatal and Early-Life Tobacco Smoke Exposure and Frequency of Common Gene Deletions in Childhood Acute Lymphobiastic Leukemia.

Provini, L. E., Corwin, M. J., Geller, N. L., Heeren, T. C., Moon, R. Y., Rybin, D. V., . . Colson, E. R. (2017, March). Differences in Infant Care Practices and Smoking among Hispanic Mothers Living in the United States.

DI, V. E., Carnelli, L., Bernardi, M., Jongerius, C., Brombin, C., Cugnata, F., . . . Sarno, L. (2016, November 29), identification of Socio-demographic and Psychological Factors Affecting VVomen's Propensity to Breastfeed: An Italian Cohort.

Efrat, M. VV., Esparza, S., Mendelson, S. G., & Lane, C. J. (2015, July). The effect of lactation educators implementing a telephone-based intervention among low-income Hispanics: A randomised trial.

Balyakina, E., Fulda, K. G., Franks, S. F., Cardarelli, K. M., & Hinkle, K. (2016, May). Association Between Healthcare Provider Type and Intent to Breastfeed Among Expectant Mothers.

Chezem, J., Friesen, C., & Boettcher, J. (2006, March 09). Breastfeeding Knowledge, Breastfeeding Confidence, and Infant Feeding Plans: Effects on Actual Feeding Practices.

Brown, A., Rance, J., & V/arren, L. (2015, January). Body Image concerns during pregnancy are associated with a shorter breast feeding duration.

### Contact

Xiaozhong Wen, MD, PhD; Assistant Professor (716-829-6811; xiaozhong@buffalo.edu)

Arsh Issany; Research Assistant arshissa@buffalo.edu

Leah Novo; Research Assistant

(leahnovo@buffalo.edu)

Faria Nateghi Hareh Dasht; Research Assistant

farianat@buffalo.edu