Breastfeeding Support Resources, Breastfeeding Initiation, and Infant Mortality Rates in North Carolina and Georgia

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Background: Professional organizations recommend breastfeeding for the first two years of life. Breastfeeding initiation rates in North Carolina (NC) and Georgia (GA) are below the national average. Research suggests breastfeeding resources help increase breastfeeding rates and lower infant mortality.

Objective: The objective of the study is to inform extension efforts to support breastfeeding. We aim to identify counties in NC and GA in need of additional support for breastfeeding and lowering infant mortality rates, and to pinpoint impactful support methods.

Study Design, Settings, and Participants: In our observational study, data consist of county-level characteristics for NC and GA. Primary outcomes are county breastfeeding initiation rates and infant mortality rates. The following data were recorded: numbers of IBCLCs, La Leche League groups, breastfeeding peer counseling programs through WIC (Special Supplemental Nutrition Program for Women, Infants, and Children), Baby Friendly hospitals, Rural-Urban Continuum Codes (RUCCs), and the Social Vulnerability Index (SVI).

Measurable Outcome/Analysis: We fit multiple linear regression models for breastfeeding initiation and infant mortality rates as a function of the four service availability types and the two population-level correlates of both outcomes. Maps were created to evaluate geographic distribution of breastfeeding and infant mortality rates and breastfeeding resources.

Results: The regression models predict the following: the support systems most significantly associated with increased breastfeeding initiation rates are IBCLCs and WIC sites numbers of IBCLCs are significantly associated with lowering infant mortality and the higher the SVI Score of a county, the lower the initiation rates, and the higher the infant mortality rates. The maps show that the regions most in need of breastfeeding support resources include North Eastern NC, Southern NC, and South Western GA.

Conclusion: Increasing the number of IBCLCs and WIC sites should be a priority in the identified underserved areas. Introducing more breastfeeding resources to the most vulnerable counties may increase breastfeeding initiation rates and lower infant mortality rates over time.

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Chat With WIC: Nutrition Information Through a Chatbot

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Background: Maya, the Texas WIC chatbot was incorporated onto TexasWIC.org to reduce administrative burdens on staff and participants by answering questions about program eligibility and helping participants make and change appointments. Maya was developed using a multi-phased iterative framework to ensure user-centered design. Previous chatbot evaluations indicated that users would like to engage with Maya to ask nutrition related questions and access nutrition information, a key component of the WIC program.

Objective: Explore current Texas WIC client knowledge, beliefs, and attitudes regarding the potential role of Maya in facilitating nutrition information for infant feeding practices.

Study Design, Settings, Participants: Participants were recruited by a targeted social media campaign for two weeks. Interviews (n = 19) were hosted on Zoom using a semi-structured guide.

Measurable Outcome/Analysis: Field notes and initial findings were reviewed in routine team meetings to discuss emergent adaptations and saturation of information. All interviews were recorded and transcribed. Data was thematically analyzed incident by incident through a two-coder system engaged in real time peer debriefing while utilizing a code book. Inter-coder reliability was achieved with an 82.7% agreement.

Results: All participants identified as mothers with age ranges from 18-44 years old and current Texas WIC clients. Participants indicated current pregnancies (2/19) and/or children ages as 1 year or younger (14/19), or 2-5 years old (3/19). Most participants (15/19) had two or more children that were currently or had previously received WIC benefits. Open-ended questions explored perceptions of usefulness and severity which yielded emergent themes of user intention to access information for breastfeeding (ie, latching information, pumping, and milk supply) and complimentary feeding (ie, how to’s, signs of readiness, food preparation, and adequate intake). Overall, most participants indicated a trust and desire to use Maya to receive nutrition information.

Conclusion: Texas WIC participants have an expressed desire for Maya to guide the exploration of WIC programmatic and nutrition information. Such a chatbot has the potential to promote engagement for effectively routing routine questions while efficiently managing programmatic resources.

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