

# Using Linked PRAMS data to Evaluate Outcomes of a Rural Healthy Start Program

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## Background

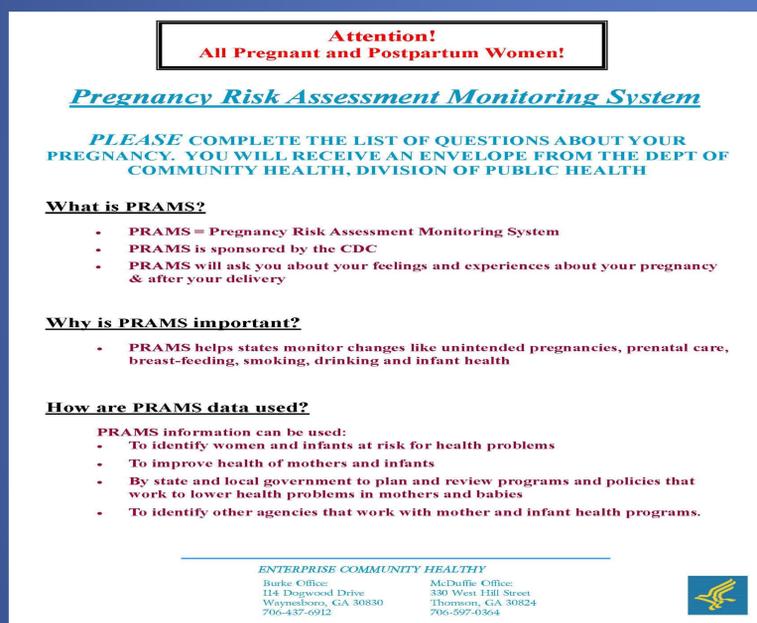
The Secretary's Advisory Committee on Infant Mortality recognized the value of linked data sets to evaluate maternal child health programs and encouraged collaboration from local, state, and national programs. For example, Enterprise Community Healthy Start (ECHS) project data were linked with Georgia vital records and with CDC's PRAMS data to further evaluate the impact of the ECHS program.

Enterprise Community Healthy Start is a community based rural services project funded by Health Research Services Administration since 1999. ECHS provides case management with home visiting and education to high-risk prenatal and interconceptional women through the first two years of the infant's life. Data linkage across local, state, and CDC data will enable evaluation of program impact with an external control group at a quasi-experimental level. Evaluation of case management and education with home visiting by registered nurses is needed to determine the impact on pregnancy outcomes of rural Georgia women.

## Methods

Researchers obtained GA Public Health IRB approval and GA Regents University IRB approval.

Community-based approaches to increasing response rates to PRAMS surveys by women in the ECHS service counties included targeted distribution of posters and flyers.



For 2010-2011, 3 strata for PRAMS data collection process:

- All mothers in Burke and McDuffie counties
- Mothers in the rest of the state delivering LBW babies
- Mothers in the rest of the state delivering NBW babies

ECHS researchers provided identified data necessary to link the data sets and verify accuracy of the linkages.

- **Initial identifiers** –Last name, maiden name, first name, date of birth, race, social security number, date of delivery
- **Additional identifiers** –Delivery hospital, age at delivery, grades completed, marital status, ethnicity, parity, med risks 1-6, maternal city, zip, and delivery hospital

Continuous collaboration was necessary to meet HIPAA and IRB requirements, plan the protocols for ECHS program evaluation using the linked data, and respond to partners' requests as the process unfolded.

## Conclusions

Linked data files are a rich source for evaluation of service projects. They provide an opportunity for external comparison groups.

## Results

Data Linkage Results		
Year	Birth + PRAMS Sampled	ECHS Total
2010	1,745	124
2011	2,406	73

ON SSN  
Maternal Name  
Delivery Date  
Maternal DOB

Data Linkage Results			
Year	ECHS Total	Matched to PRAMS	Responded
2010	124	114/124	76/114
2011	73	70/73	51/70

Of ECHS subjects sampled by PRAMS, 67% responded to the survey in 2010 and 73% responded in 2011.

## Discussion

The data will be used to:

- Evaluate the local project
- Test various designs for the evaluation
- As a pilot for the national Healthy Start evaluation
- Apply our lessons learned as national evaluation team proceeds with its planned approach

The study design for the local program evaluation using the linked perinatal data will be a secondary analysis of linked PRAMS data conducted among singleton births to assess differences between ECHS clients and:

- Non-ECHS women residing in the same project area counties,
- Non-ECHS women residing outside the project area but in similar Georgia counties, and
- non-ECHS women residing in non-HS Georgia counties.

## Recommendations

- Leverage existing partnerships
- Build upon sound local data collection system
- Communicate locally to promote PRAMS awareness.
- Publish and communicate as you proceed
  - 2010 CDC brief: Two Pieces of the Puzzle: A collaboration between the Pregnancy Risk Assessment Monitoring System (PRAMS) and Healthy Start
  - Ogbuanu, Chinelo. (2010). PRAMS National Meeting presentation
  - Reports to HRSA in annual ECHS continuation application
  - Mobley, S.C., Thomas, S.D., Sutherland, D., Hudgins, J., Ange, B., Johnson, M. (2014). Life skills progression among rural perinatal women. *Maternal Child Health Journal*, 18 (8), 1881-1892.
  - Thomas, S.D., Sutherland, D., Hudgins, J., Ange, B., Johnson, M., & Mobley, S.C. (2015). Perinatal Program Evaluations: Methods, Impacts, and Future Goals. *Maternal and Child Health Journal*. 19: 1440-1446. DOI: 10.1007/s10995-015-1677-2.
- Adhere to IRB process
- Maintain regular meeting schedule among collaborators
- Maintain regular communication with federal agencies
- Maintain central leadership support
- Attend to continuity of key members
- Build in backup of key people if possible
- Build in time for the unexpected