Roundtable: Evaluation of a multi-site asthma program initiative: Linking program activities with distal outcomes to demonstrate systems change

Lynn D. Woodhouse, M Ed, EdD, MPH 1, Russ Toal, MPH 2, DeAnna Keene, MPH 3, Laura H. Gunn, PhD 4, Simone M. Charles, PhD 5, Cassandra Arroyo, PhD 6, Stuart Tedders, PhD 7, William Livingood, PhD 8, Trang Nguyen, MD, MPH DrPH 9.

APHA, Denver, CO
November, 2010

(1) Associate Dean and Professor of Community Health, JPHCOPH Georgia Southern University, Cone Hall, PO Box 8015, Statesboro, GA 30460. (2) Clinical Associate Professor, JPHCOPH Georgia Southern University, PO Box 8015, Statesboro, GA 30460. (3) Research Associate, JPHCOPH GSU, PO Box 8015, Statesboro, GA 30460. (4) Jiann-Ping Hsu College of Public Health, Assistant Professor of Biostatistics Georgia Southern University, PO Box 8015, Statesboro, GA 30460. (5) Environmental Health Sciences, Georgia Southern University, P.O.Box 8015, Building 0253, Cone Hall, Herty Drive, Statesboro, GA 30460. (6) Assistant Prof of Epidemiology Jiann Ping Hsu College of Public Health, Georgia Southern University, PO Box. 8015, Statesboro, GA 30460. (7) Jiann-Ping Hsu College of Public Health, Georgia Southern University, P.O. Box 8148, Statesboro, GA 30460. (8) Duval County Health Department & Univ of Florida, 900 University Blvd, Suite 604, Jacksonville, FL 32211. (9) Public Health Asthma Surveillance and Program Evaluation, New York.

lwoodhouse@georgiasouthern.edu
Comprehensive Evaluation of the Georgia Childhood Asthma Management Program

Funded by:
Healthcare Georgia Foundation, Inc. (HCGF)
Atlanta, GA
This presentation will:

• Document the processes the evaluation team used to support the linking of the systems objectives (such as improved systems of care) to the distal outcomes (ER use and school absenteeism reductions leading to improved health status) through more short term or intermediate outcomes such as changes in timely use of appropriate medications or reduction in triggers for asthma.

– The need to produce a clear link between the program activities, systems changes and outcomes through evaluation evidence is critical when calling for policy change.
HCGF Childhood Asthma Grantees

- **Children's Healthcare of Atlanta Foundation**
  provides an integrated approach to managing childhood asthma for children in metropolitan Atlanta

- **Georgia Association for Primary Health Care, Inc.**
  improve asthma management among children and adolescents by implementing the Learning Model, Chronic Care Model and Performance Improvement Model in four of Georgia's federally qualified health centers

- **Georgia State University Research Foundation**
  continue an asthma management program in the N P Unit V community, with a focus on training and health care navigation for children and their parents/caregivers

- **Lowndes County Board of Health**
  to continue a childhood asthma management program through Children's Medical Services

- **St. Galilee Outreach Ministry, Inc.**
  to continue to implement the Central Georgia Asthma Education Initiative (CGAEI), a community health education program targeting six counties in the North Central Health District.
First year of the evaluation

• 2009-2010:
• Most grantees worked with our ET to refine their evaluation plans, devise functional mechanisms for data collection, increase client referrals, improve their programmatic infrastructure, solidify and expand partnerships, begin to integrate their programs into electronic registration or record systems, and position themselves for success in the second and third years of their grants.

• The efforts on year one also included assisting grantees with logic model development, understanding what will be required to achieve system changes, assessing the opportunities for accomplishing and sustaining such changes, and on monitoring grantee enrollment and measurement progress.
Plan for year 2 emerged from challenges of year 1

- Proposed a coaching/consulting approach to evaluation whereby the ET provides evaluation expertise to assist the Grantees to enhance the identification, collection, management and analysis of data.

- This approach will:
  - facilitate and support progress in achieving their program goals with increased emphasis on systems goals.
  - include TA to help grantees refine output and outcome target metrics and help them create basic systems to collect and utilize data.
  - enhance the use of data to support ongoing QI of the programs as the Grantees clarify the relationship of the programs to evidence based practice.

Now evaluators will have an active role in helping the Grantees reorganize the objectives and identify metrics and data systems that enhance the Grantees’ capacity to achieve goals for enhancing the systems that support prevention and control of asthma episodes.
Logic Model Separating System Changes to Target Individual and Organizational Levels

Woodhouse and Livingood, 2010

Individual Level (Families & Children)
- Recruitment; Enrollment; Education; & Services.

Organizational Level (Primary Care, school nurses, hospitals, NGOs, PH agencies)
- Education & Training; Development & implementation:
  - system to collect, enter, manage & analyze data,
  - systems for data exchange and referral;
  - Network & advocacy to change policies & programs.

Program Activities

Output target Measures
- # child/families;
- # contacts & service by type & place (office, home, other)

Immediate Outcomes Measures
- Family/Indiv
  - Behavior change including use of asthma plan and adherence
  - Removal of triggers in home

Distal Outcomes
- # of practices and other providers with data systems showing # & % of children receiving:
  - Outreach & Follow up
  - NCQA Primary Care recommended care
  - Review & update of Asthma Plans
  - Wagner CCM performance measures Functioning registry (# & type of users, # of queries)
  - Policy changes (schools, public places, etc)

- reduced ER & HOSP use
- increased HROOL
- reduced absenteeism
- 911 calls
- PHC acute visits
Process Map for Asthma Evaluation Coaching
Livingood and Woodhouse, 2010

1. Review objectives & performance measures (data collection, recording & reporting) for clarity of objectives & adequacy of performance measures

2. Root Cause Analysis to identify problems & issues with achieving performance measures, particularly related to systems

3. Revise & refine intervention/activity performance measures to address problems identified in Root Cause Analysis and focus on systems, aligning activities with outcomes

4. Bi-monthly: monitor implementation, specifically examining linkage of performance data on activities to performance data on systems changes

5. Engage in joint problem solving & provide formative feedback, particularly related to performance data on activities & performance data on systems changes
Training process for linking activity to outcome

- Activity & Output measures
- Immediate Outcome Measures
- Intermediate Outcome Measures
- Long term Outcome measures such as reduced ER use
Logic Model/Performance Measures & PDSA

Use Logic Model to clarify re-evidence

Use data to assess status

Livingood-2010
Where are we now?