A Pilot Study Demonstrating the Potential Impact of Pre- and Inter-conceptional Care Case Management:

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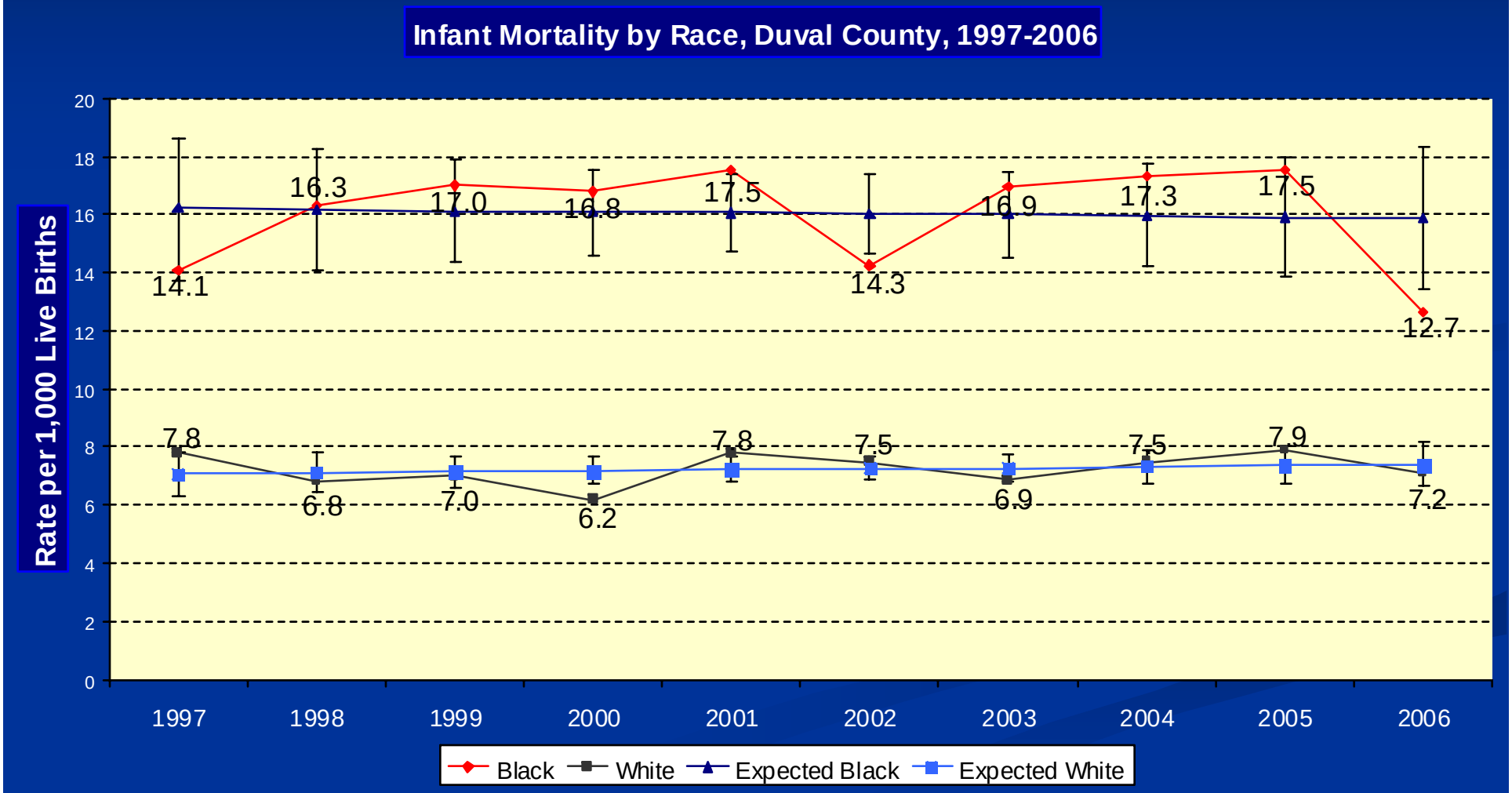
Topics

- Overview of Problem
- Description of Magnolia Project
- Evaluation Design
- Findings
- Conclusions

Infant Mortality In Jacksonville



Black & White Fetal-Infant Death Rates By Period of Risk, Duval County 1995-97

	Fetal (24+ Wks Gestation)	Neonatal	Postneonatal
500-1499g	**Maternal Health/Prematurity*** *Black 6.9 White 2.3* RR= 3.01 (2.14, 4.25 95%C.I.)		
1500+g	**Maternal Care*** *Black 3.4 White 2.0* RR=1.70 (1.12, 2.58 95%C.I.)	**Newborn Care** *Black 1.5 White 1.2* RR= 1.22 (0.67, 2.20 95%C.I.)	**Infant Care** *Black 2.8 White 1.9* RR= 1.44 (.092, 2.24 95%C.I.)

Total Fetal-Infant Deaths/1000 (Live Births + Fetal Deaths)* =
Black 14.6 White 7.4
RR=1.96
(1.59, 2.41 95% C.I.)

*** Statistically significant**

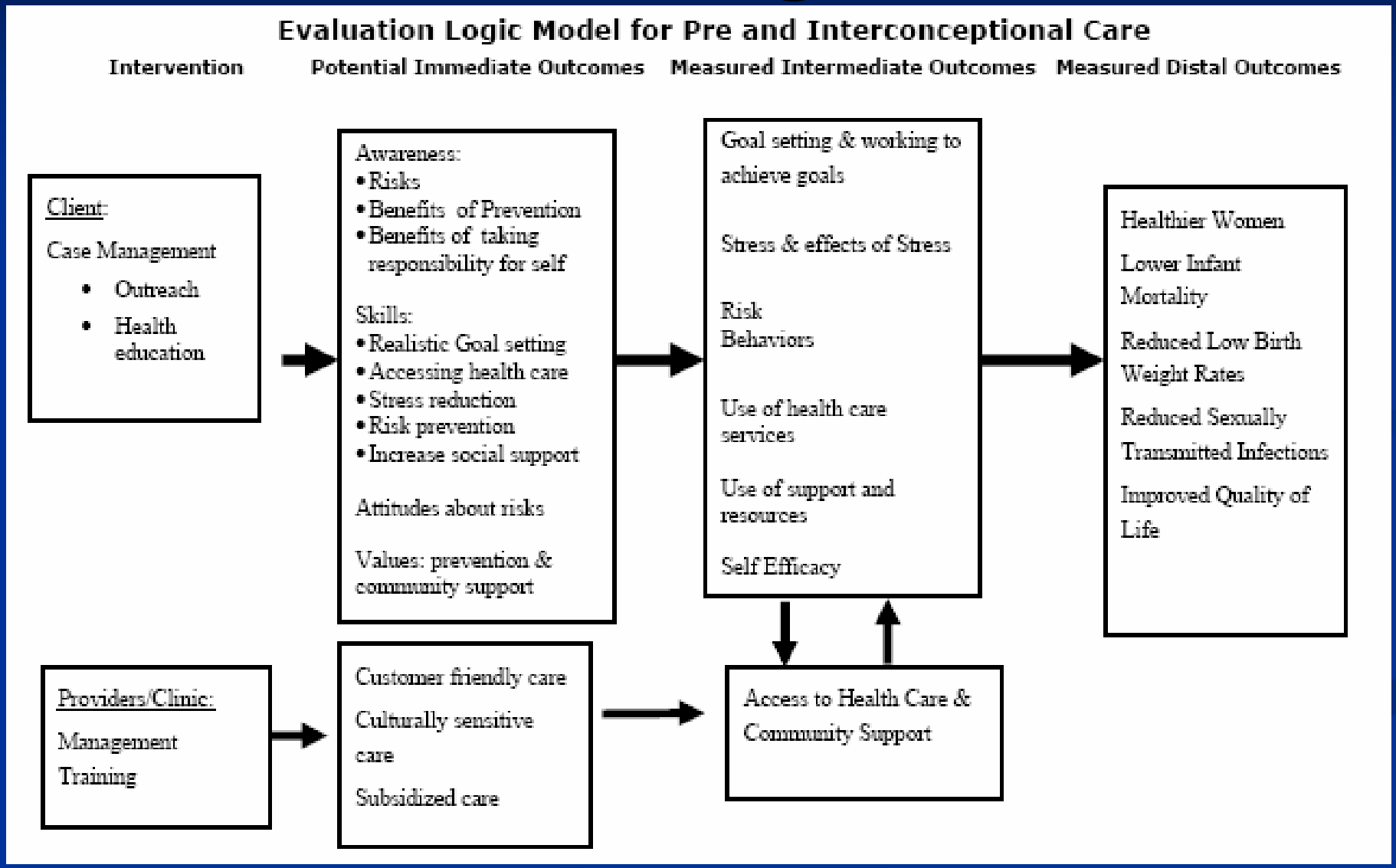
The Magnolia Project

A special Healthy Start initiative to improve the health and well-being of women during their childbearing years

Project Components

- Outreach and Case Finding
- Enhanced Clinical Services
- Case Management
- Risk Prevention & Reduction (Health Education)
- Consortium (Community Council)

Evaluation Logic Model



Evaluation Design

- Intervention Process
  - Focus Groups
  - Ethnographic Observations
- Immediate & Intermediate Outcomes
  - Pre/Post Data collection
    - Risky behaviors, perceived stress, self efficacy, social support and goals for the future
- Distal (Retrospective) Outcomes
  - Infant mortality, low birth weight, birth spacing and repeat STDs

Process Evaluation

- Builds on ongoing quantitative program data collection (UNF)
- Ethnographic data collection to collect qualitative data on program qualities
  - Direct observation
  - Focus Groups

Prospective Study Design

- Prospective data (collected at entry and at least 90 days later) for all clients entering the program.
- Comparison group with similar risk factors.
- Data collected with "trained lay health workers" using PDA instruments to enter and record data.
- Instruments selected and developed to collect data on major psycho-social factors that the program was intended to influence (as perceived by case managers).

Prospective Study
Intermediate Outcome measures

- Self efficacy
- Perceived stress
- Social Support
- Goals and future
- High-risk behaviors

Prospective Study Intermediate Evaluation Outcomes

- Primary Hypotheses

Intermediate Outcomes	Magnolia Case Management	Control Group
Perceived Stress	↓	—
Risky Behaviors	↓	—
Goals and Future	↑	—
General Self Efficacy	↑	—
Social Support	↑	—

Distal Evaluation Outcomes

Primary Hypotheses

Distal Outcomes	Magnolia Case Management	Control/ Comparison Groups
Infant Mortality Rate	↓	—
Low Birth Weight	↓	—
Repeat STDs	↓	—
Interconceptional Period	↑	—

Distal Outcome Evaluation Design

- Retrospective
- Secondary data Analysis
  - Program Files linked to Vital Statistics and Surveillance data
  - Comparison group data from health care and public health data bases

Distal Outcome Evaluation Sample

- Magnolia Case Management Clients
  - Program criteria for high risk women
  - All clients who completed at least 90 days – minimum (not optimal) dose effect -
  - n=206
- Comparison groups
  - Matched comparison group based on risk factors
    - n= 422 (double size of intervention group to increase power)
  - Two population based comparison groups
    - Clients from high risk zip codes
    - Clinic only clients using Magnolia

Distal Outcome Evaluation Analysis

- SAS - SURVEYSELECT for selection of comparison group
- SAS Chi square tests or Fisher Exact tests to assess statistical significance between pre & post birth outcomes (birthweight and infant mortality) and repeated STDs.
- SAS - generalized estimating equation (GEE) procedure to test for significance between groups in pre-post change.
- SAS - relative risk analysis to assess the proportional difference of infant mortality rates and low birthweights between Magnolia and other groups.

Findings: Process

- Confirmed atypical community sensitive services.
- Program was well received by participants.
- Program was recruiting exceptionally high risk women. (Confirmed with Outcome data)

Findings: Prospective Study Attitudes and Perceptions

Measure	Magnolia Change Score (n=16)	Control Change Score (n=16)	Between Group *p* value	Power Estimate *p*=.05
Perceived Stress*	-1.19	.50	.35	164
Goals and Future**	.25	1.10	.23	N/A
General Self Efficacy**	2.38	1.69	.50	84
Social Support**	2.81	2.44	.37	184
Risky Behaviors*	-.06	-.20	.13	N/A

* Low Score Desired
**High Score Desired

Findings: Outcomes

Table 1. Within Group Comparisons of Low Birth Weights*: Magnolia Case Management Clients and Control Group Participants, 1995-2005

	Magnolia (n=206)			Control (n=412)			Magnolia Clinic Only Clients Freq (%)	Non Magnolia Clients in Magnolia Zipcodes Freq (%)
	Before CM (%)	After CM (%)	% Change P-value	Before CM (%)	After CM (%)	% Change P-value		
Low Birth Weight	34 (27.6)	14 (16.7)	-10.9* (.066*)	53 (13.1)	52 (16.3)	3.2+ (.245+)	269 (15.9)	2407 (13.6)
Normal Birth Weight	89 (72.4)	70 (83.3)		351 (86.9)	266 (83.8)		1419 (84.1)	15301 (86.4)

* Magnolia Before CM versus After CM

\+ Control Before CM versus After CM

Source: Duval County Health Department - Health Management Systems (HMS)

Findings: Outcomes

Table 2. Between Group Comparison of Low Birth Weights: Magnolia Case Management versus Control Group , 1995-2005

	Magnolia (n=206)		Control (n=412)		GEE Analysis *p* Value
	Before CM (%)	After CM (%)	Before CM (%)	After CM (%)	
Low Birth Weight	34 (27.6)	14 (16.7)	53 (13.1)	52 (16.3)	.066
Normal Birth Weight	89 (72.4)	70 (83.3)	351 (86.9)	266 (83.8)	

Source: Duval County Health Department-Health Management Systems (HMS)

Findings: Outcomes

Table 3. Comparison of Infant Mortality Rate*: Magnolia Case Management Clients and Non Participants, 1995-2005

	Magnolia Case Management Clients (n=206)		Control (n=412)		Magnolia Clinic Only Clients	Non-Magnolia Clients in Magnolia Zip Codes
	Before CM	After CM	Before CM	After CM		
Infant Death	10	3	11	12	55	247
Live Birth	123	84	404	320	1688	17715
Infant Mortality Rate	81.3	35.7	27.2	37.5	32.6	13.9

*Rate=per 1000 live births

Source: Duval County Health Department-Health Management Systems (HMS)

Findings: Outcomes

Table 4. Comparison of Sexually Transmitted Diseases: Magnolia Case Management (CM) Clients and Control (Non-Magnolia Clients), 1995-2005

	Magnolia CM clients (n= 222)		Control group (n=412)	
	Freq	%	Freq	%
Repeat STDs	24	10.8	53	12.9
After CM Only	23	10.4	69	16.7
No Post STDs	175*	78.8	290	70.4

*p=.02
Source: Florida Department of Health of Sexually Transmitted Disease Bureau

Conclusions

- Interconceptional Care
- Program standardization
- Policy: Medicaid
- Future Research

Conclusions
Interconceptional Care

- Reduced Infant Mortality
- Reduced Low Birth Weight
- Reduced STDs

Conclusions
Program Standardization

- Inconsistency in program delivery presents problems for documenting success
- Diffusion and replication of innovation requires definition of innovation
- Balance fidelity and flexibility (Tailor to community)

Conclusions
Medicaid Policy

- Expand role and scope of Medicaid family planning waiver (Texas – Women's Health Medicaid Waiver)
- Expand eligibility to include women with specific risk factors (e.g. previous loss)
- Expand services beyond clinical care
  - contraception to include case management,
  - selected risk reduction services (could be an add-on to Healthy Start)

Conclusions
Future Research

- Designs sensitive to Complexity – Multiple determinants
- Generalizability
- Standardization of Intervention

Contacts

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