



# **Well Woman Program: A Community-based STI Prevention Trial**

November 5, 2007

Abstract #3156.0

Public Health Nursing Research

NIH NINR R01 04836

“...to improve health and reduce the burden of illness in society...”

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# Well Woman Research Team

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# Purpose of the Study

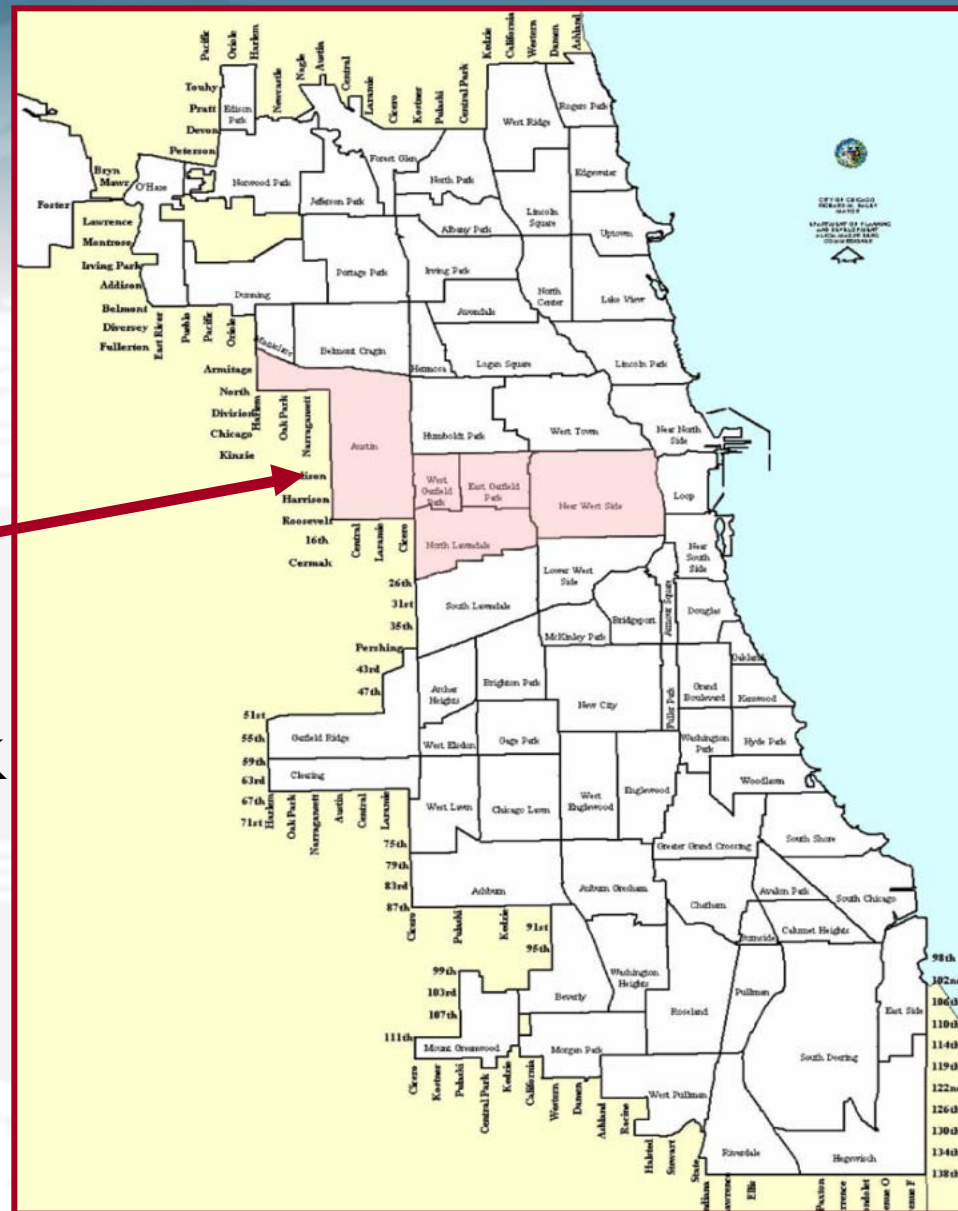
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Test the efficacy of a 12 month multimodal (bundled) APN care management intervention for preventing STIs among Chicago West Side African American women with repeated STIs.

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## 5 West Side Communities

- Austin
- West Garfield Park
- East Garfield Park
- North Lawndale
- Near West Side



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# Literature Review

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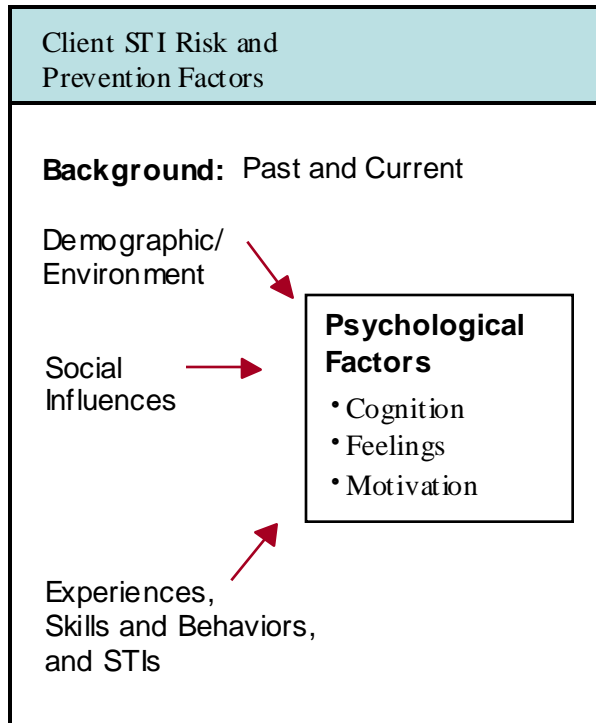
- Few studies reflect biological outcomes (laboratory testing of STIs);
- Few studies target high risk African-American women alone;
- All had high levels of coordination in order to have repeated STI testing and treatment;
- Most successful RCTs have high intensity interventions (Kamb, Shain), though one successful study (Jemmott et al., 2007) had low intensity intervention.

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# STI PREVENTION FRAMEWORK

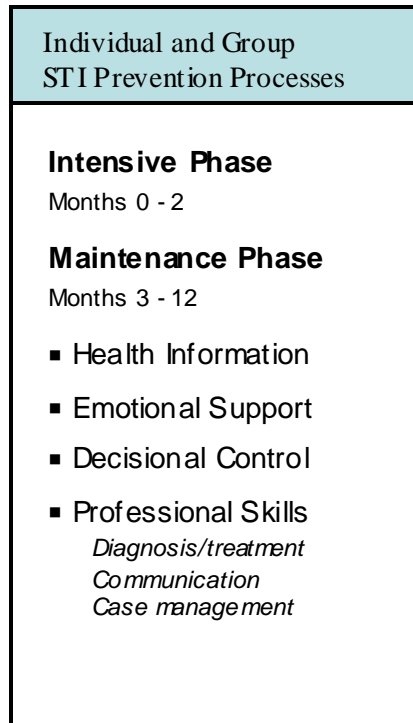
## STI RISK ASSESSMENT

Baseline



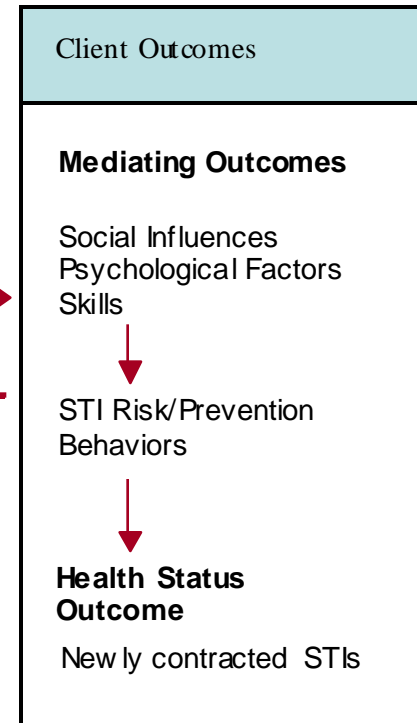
## INTERVENTION STRATEGIES

Months 0 - 12



## OUTCOMES

Months 2, 6, 12



Adapted from Cox, C. (1982) An interaction model of client health behavior: theoretical prescription nursing. Advances in Nursing Science, 5, 41-56.

# Overarching/Working Hypothesis

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The *better the fit* between the uniqueness of the consumer (cognitive, affective, and motivational needs and behavioral interventions) and the provider interaction/intervention, the *better the outcomes*.

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# Intervention

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## Multi modal

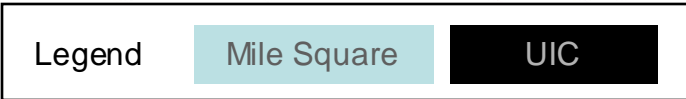
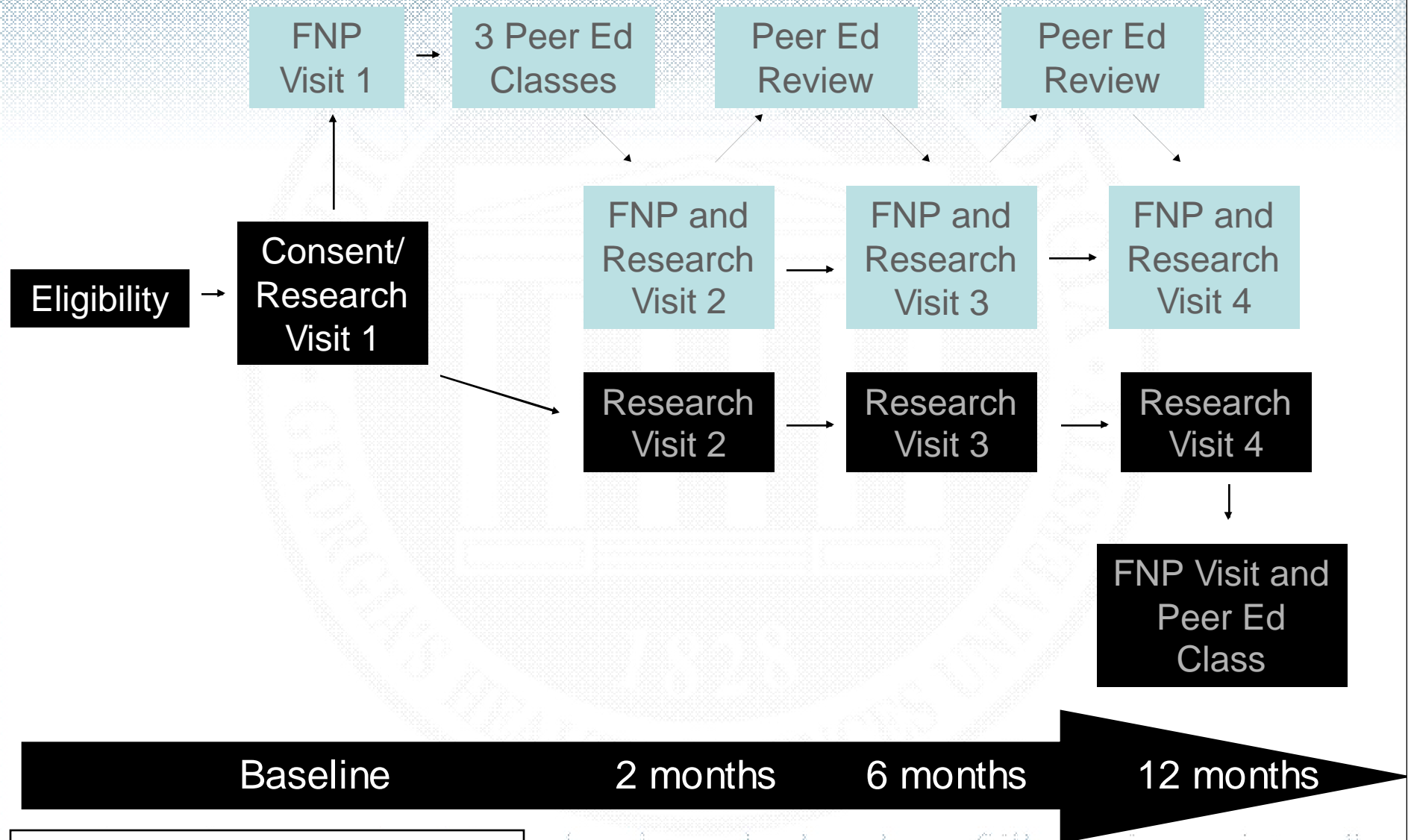
- APN Care Management
- Peer Education

## Multi Level

- Group intervention targeted to background variables
- Individual intervention tailored to background and psychological variables

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# Design



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# Background characteristics

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## Inclusion Criteria

- African American woman
- Low income
- 18 years or older
- Lives in/frequents Chicago's Westside
- STI in past year and one other in history

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# Demographic characteristics by Well Woman Program and Minimal Intervention group

	<b>WWP Intervention (n=172)</b>	<b>Minimal Intervention (n =170)</b>	<b>Complete Sample (N = 342)</b>
	M (SD)	M (SD)	M (SD)
Age (years)	38.3 (8.3)	37.9 (9.3)	38.1 (8.8)
Age at first Intercourse	15.4 (2.9)	15.4 (2.8)	15.4 (2.7)
Number of lifetime partners	28.7 (33.2)	23.9 (29.3)	26.3 (31.3)
Number of Children	3.1 (2.2)	3.3 (1.9)	3.46 (1.9)
	N (%)	N (%)	N (%)

# Demographics, cont.

	WWP Intervention (n=172)		Minimal Intervention (n =170)		Complete Sample (N = 342)	
	M	(SD)	M	(SD)	M	(SD)
Married or Partnered	95	(62.5)	113	(72.4)	208	(67.5)
High School Graduate/GED	86	(50.6)	78	(45.3)	164	(48.0)
Employed	21	(12.4)	18	(10.5)	39	(11.4)
Childhood Sexual Abuse	43	(25.9)	54	(32.3)	97	(29.1)
Coercion to have sex	38	(23.2)	37	(21.8)	75	(22.5)

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# Time-varying covariates and STIs by group

Measure (possible score range)	Baseline (n=342)	Visit 2 (n=239)	Visit 3 (n=208)	Visit 4 (n=181)
	M (SD)	M (SD)	M (SD)	M (SD)
<b>STI Knowledge (0-12)</b>				
MI	10.2 (1.6)	10.4 (1.6)	10.5 (1.5)	10.5 (1.5)
WWP	9.9 (1.7)	10.8 (1.3)	10.6 (1.5)	10.5 (1.5)
<b>STI Self Risk Appraisal (3-9)</b>				
MI	7.3 (2.7)	6.6 (2.8)	6.2 (2.5)	5.9 (2.5)
WWP	7.3 (2.6)	6.4 (2.5)	5.7 (2.5)	6.2 (2.4)
<b>Self Esteem (1-4)</b>				
MI	3.1 (.48)	3.1 (.47)	3.2 (.48)	3.1 (.49)
WWP	3.4 (.49)	3.2 (.49)	3.2 (.48)	3.1 (.48)

# Time-varying covariates and STIs by group, cont.

Measure (possible score range)	Baseline (n=342)	Visit 2 (n=239)	Visit 3 (n=208)	Visit 4 (n=181)
	M (SD)	M (SD)	M (SD)	M (SD)
<b>Feelings Toward Condom Use (3-9)</b>				
MI	7.3 (1.9)	7.9 (1.6)	8.2 (1.4)	7.9 (1.6)
WWP	7.1 (1.9)	8.2 (1.5)	8.1 (1.6)	8.3 (1.5)
<b>Perceived control in condom-use negotiation (3-9)</b>				
MI	7.0 (1.8)	7.4 (1.9)	7.3 (2.0)	7.3 (2.2)
WWP	6.6 (2.2)	7.2 (1.9)	7.4 (1.9)	7.2 (2.0)

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# Time-varying covariates and STIs by group, cont.

Measure (possible score range)	Baseline (n=342)	Visit 2 (n=239)	Visit 3 (n=208)	Visit 4 (n=181)
	M (SD)	M (SD)	M (SD)	M (SD)
<b>STI Risk Index (0-14)</b>				
MI	6.59 (2.2)	6.06 (2.1)	5.40 (2.2)	5.06 (2.7)
WWP	6.81 (2.6)	4.47 (2.0)	4.44 (2.4)	4.04 (2.1)
<b>Any STI</b>	N (%)	N (%)	N (%)	N (%)
MI	122 (74.4)	81 (67.5)	67 (58.3)	68 (70.8)
WWP	122 (75.3)	58 (63.0)	54 (40.7)	44 (53.7)

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# Mathematical model for the data

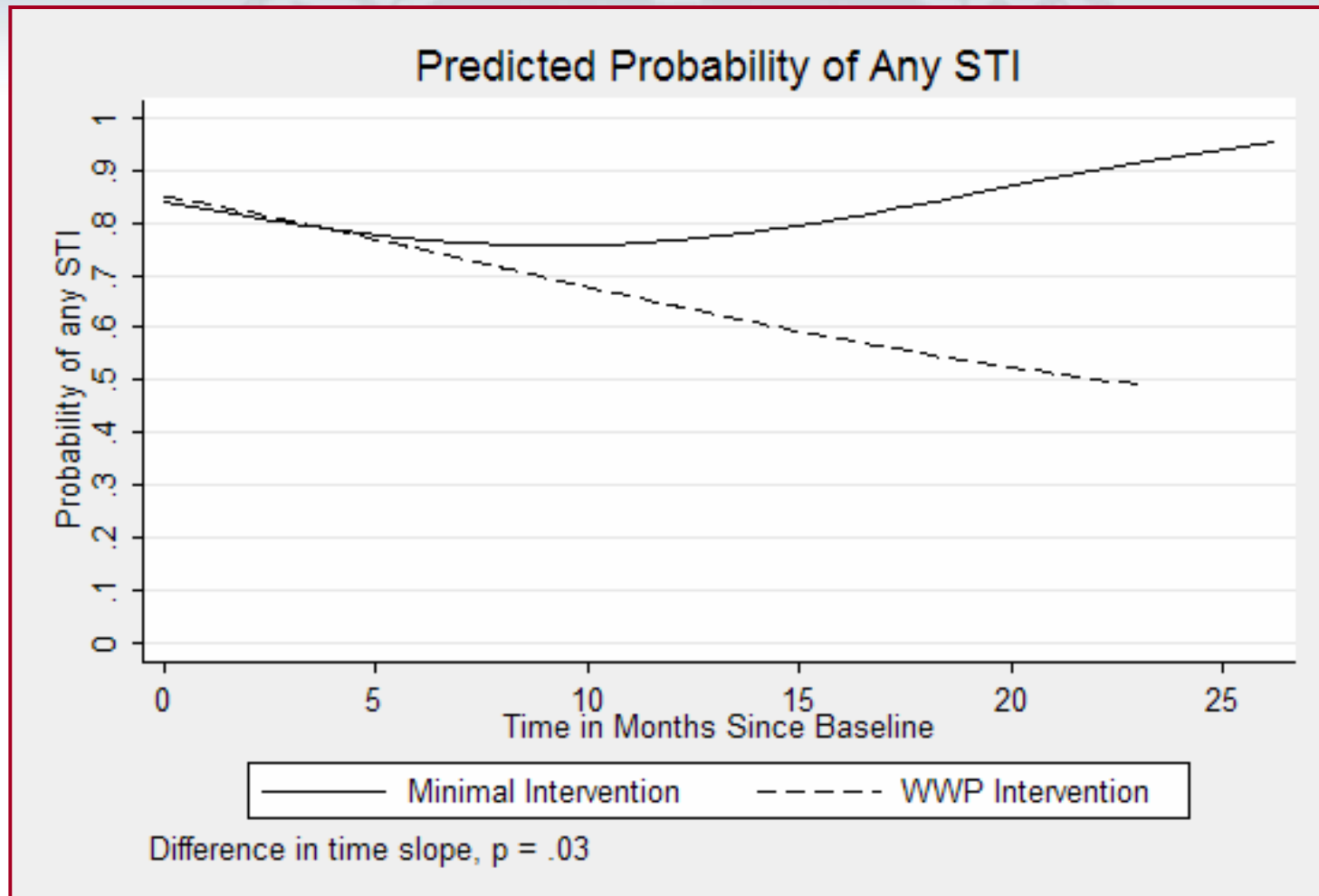
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Analysis done using Stata

$$\log \left[ \frac{p_{it}}{1 - p_{it}} \right] = \beta_0 + \beta_1 \text{Group}_i + \beta_2 \text{Time}_{it} + \beta_3 \text{Group} * \text{Time}_{it} + u_i + e_{it}$$

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# Graphical Representation of Results



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# Outcome

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The effects of the program (including the covariates):

At month 15 the probability of a WWP participant contracting an STI was 20% less than that of a Minimal Intervention participant.

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# Discussion

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- What began as an efficacy study became more an effectiveness study with more real world circumstances.
- Trichomonas is highly prevalence among this older group of high risk women.
- Findings were consistent with the literature: intensive interventions are needed for STI outcome change.
- Limitations were due to attrition, change in venue, change in type of subject, and participants who stayed in the study.

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# Conclusion

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- Although both interventions were clearly effective in reducing STIs during the first six months, the NP care delivery model that incorporated individual tailoring and group targeting to develop prevention knowledge, will, and skill led to a *decrease in STIs that was sustained*.

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