

# HEALTHY BABIES AND HEALTHY MOMS



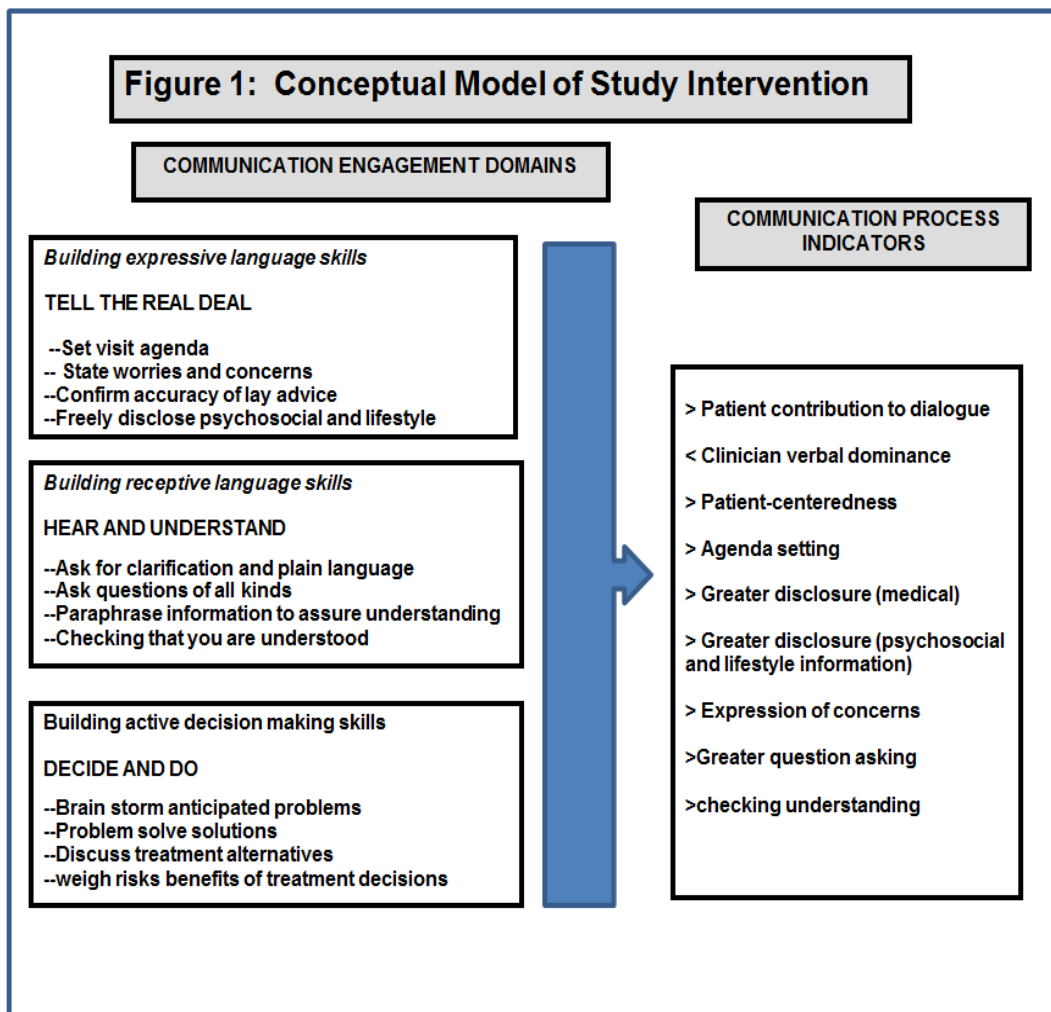
**Funding from NICHD: RO1 HD050437 “Amelioration of Literacy Deficits in Prenatal Care”**

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# Key communication skill domains

## Social Learning Principles Guiding the Intervention Design

**Figure 1: Conceptual Model of Study Intervention**



**Identification and vicarious modeling:** Four role-models briefly convey their unique story in an engaging narrative that relates challenges and concerns, as well as excitement and positive aspirations for a healthy pregnancy and baby.

**Visualization:** Demonstration of the targeted skills are presented by the role-models in short (30-40 second) video segments.

**Mental Rehearsal:** The narrator frequently encourages women to imagine using the demonstrated skills as applied to their own situation and concerns, expectations, questions and treatment options.


**Verbal persuasion:** The narrator expresses confidence that the user can use the skills and take charge of their visits “just like my Moms do”

**Reinforcement:** An individualized summary of viewed clips, organized by skill domains and with space for personal notes, is printed for use during the prenatal visit.







Figure 1: Character Summary of Skill Role Models

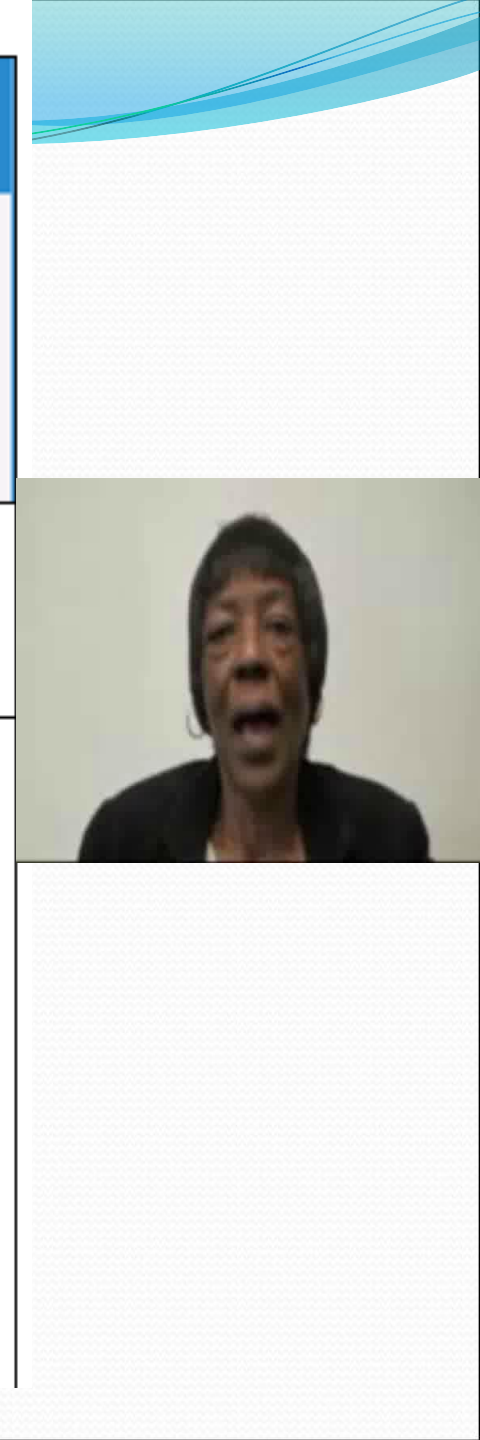
## Choose your guide



Debra, click on the picture of the mom that you would like to be your guide.

ALICIA	COURTNEY	APRIL	SHIVONE
<p>So....to be honest....I'm kinda' not lookin forward to havin' this baby. My mom says I will get more excited the closer it gets – I don't know about that. Going out with my friends is the only thing that makes me feel like myself. Tynies – my boyfriend--is excited – he says he is gonna spoil him real good. I'm not sure what the doctor is going to do for me. This is my first baby. But I am getting worried and a little scared.</p>	<p>Well, we really can't wait for the baby to come. I hope she's a girl, but Devon wants a boy. Either way, we're going to love her (or him). I have asthma and have to be careful. That worries me, what the asthma might do to the baby or if it will get worse while I'm pregnant.</p>	<p>I am looking forward to my second baby but I'm pretty tired right now and really not sleeping so well. Taking care of my two year old, Thomas, and working is just wearing me out</p>	<p>This is a surprise – they call it the change of life baby. It sure will change my life! Don't get me wrong, I feel lucky in lots of ways to be having a baby at my age. I was so young when I had my other kids– I was a kid myself. Anyway, being older has its benefits and I think I am going to enjoy this pregnancy.</p>



# Patient Characteristics

	Baby Basics	Healthy Babies Health Moms
Average Age	23.0 (16-38)	24.6 (18–44)
Number of prenatal visits prior to index (95% CI)	4.6 (0 – 14)	5.5 (0 – 17)
Gestation in weeks at Index Appointment (95% CI)	24.2 (11.4 – 37.8)	24.8 (12.6 – 39.1)
REAL-G literacy score (SD) # correct items (grade equivalent)	5.0 (2.8)	5.6 (2.8)
< 4 (< 6th grade equivalent)	13 (31%)	7 (18%)
4 – 7 ( ≥ 6th through 8th grade)	15 (36%)	17 (45%)
8 (HS grade equivalent)	14 (33%)	14 (37%)
Ethnicity		
African American	34 (81%)	31 (79%)
White	6 (14%)	5 (13%)
Other (Asian, American Indian, mixed race)	2 ( 5%)	3 ( 8%)
Education		
<HS	16 (38%)	12 (31%)
HS/GED	13 (31%)	17 (43%)
Post-Secondary	13 (31%)	10 (26%)

# Communication Structures

	Baby Basics Mean (CI)	Healthy Babies Health Moms Mean (CI)
Session Length(in minutes)		
< 8 <sup>th</sup> grade equivalent	22.9 (17.4 – 28.4)	23.7 (18.9 – 28.6)
≥ 8 <sup>th</sup> grade equivalent	22.4 (18.3 – 26.5)	21.4 (17.4 – 25.5)
<b>Total Patient Statements</b>		
< 8 <sup>th</sup> grade equivalent	104 (93 – 115)	129 (112 – 146)*
≥ 8 <sup>th</sup> grade equivalent	136 (113 – 158)	172 (137 – 207)+
<b>Total Physician Statements</b>		
< 8 <sup>th</sup> grade equivalent	275 (235 – 315)	244 (216 – 272)
≥ 8 <sup>th</sup> grade equivalent	277 (245 – 310)	258 (212 – 304)
Ratio of Clinician/Patient Talk		
< 8 <sup>th</sup> grade equivalent	2.8 (2.2 – 3.3)	2.2 (1.9 – 2.5)+
≥ 8 <sup>th</sup> grade equivalent	2.6 (2.3 – 3.0)	1.8 (1.5 – 2.1)*
<b>Patient-centeredness (1A)</b>		
< 8 <sup>th</sup> grade equivalent	0.49 (0.43 – 0.55)	0.58 (0.52 – 0.64)+
≥ 8 <sup>th</sup> grade equivalent	0.46 (0.40 – 0.52)	0.59 (0.52 – 0.65)*

Patient Centeredness = Sum of clinician (psychosocial/lifestyle questions, information and counseling, facilitation/activation) and patient (all questions, psychosocial/lifestyle information and emotional statements) / clinician (medical questions, information and procedures) and patient (medical information)

Scores adjusted for nesting of patients within provider, gestation at visit and visit length  
+p<.1; \*p<.05



# Patient Communication Categories

	Baby Basics Mean (CI)	Healthy Babies Health Moms Mean (CI)
Questions ≤ 8th grade level ≥ High School Level	4.3 (2.8 – 5.8) 6.2 (4.3 – 8.1)	5.3 (4.1 – 6.5) 5.6 (4.0 – 7.2)
Medical Information Disclosure ≤ 8th grade level ≥ High School Level	<b>35.2 (27.5 – 42.9)</b> 40.0 (31.3 – 48.8)	<b>44.9 (38.5 – 51.3)*</b> 48.8 (27.5 – 70.1)
Psychosocial/Lifestyle Information Disclosure ≤ 8th grade level ≥ High School Level	<b>12.3 (10.0 – 14.6)</b> <b>12.0 (8.7 – 15.4)</b>	<b>16.4 (14.1 – 18.8)*</b> <b>19.0 (11.5 – 26.4)+</b>
Emotional Statements ≤ 8th grade level ≥ High School Level	4.8 (2.7 – 6.8) 6.8 (4.8 – 8.7)	8.6 (6.0 – 11.3)* 14.0 (7.7 – 20.2)*
Concern Statements ≤ 8th grade level ≥ High School Level	3.6 (1.9 – 5.3) 3.9 (2.4 – 5.3)	7.4 (5.3 – 9.5)* 9.9 (4.8 – 15.0)*
Approval Statements ≤ 8th grade level ≥ High School Level	1.3 (1.1 – 1.6) 2.5 (1.7 – 3.2)	0.8 (0.5 – 1.1)** 1.5 (1.1 – 1.9)**
Orientation Statements ≤ 8th grade level ≥ High School Level	0.8 (0.4 – 1.12) 0.7 (0.4 – 1.01)	1.3 (1.0 – 1.6)*** 1.2 (0.7 – 1.7)***
Global Ratings of Dominance ≤ 8th grade level ≥ High School Level	3.0 (2.7 – 3.3) 3.5 (3.2 – 3.7)	3.4 (3.3 – 3.6)** 3.7 (3.5 – 4.0)

Scores adjusted for nesting of patients within provider, gestation at visit and visit length

+p<.1; \*p<.05; \*\*p<.001; \*\*\*p<.0001

# Clinician Communication Categories

	Baby Basics Mean (CI)	Healthy Babies Health Moms Mean (CI)
All Questions		
≤ 8th grade level	32.7 (23.4 – 42.0)	31.2 (25.6 – 36.7)
≥ High School Level	25.4 (20.6 – 30.2)	26.1 (17.5 – 34.6)
Medical Information & Counseling		
< 8th grade level	<b>71.3 (58.2 – 84.5)</b>	<b>58.0 (46.2 – 69.8)*</b>
≥ High School Level	90.8 (71.8 – 109.8)	71.9 (49.7 – 94.1)
Psychosocial/Lifestyle Information & Counseling		
≤ 8th grade level	9.7 (6.36 – 13.0)	10.7 (7.7 – 13.6)
≥ High School Level	12.5 (8.7 – 16.3)	13.0 (3.1 – 22.9)
Facilitation/Activation Statements		
≤ 8th grade level	47.7 (39.3 – 56.1)	49.1 (40.4 – 57.9)
≥ High School Level	38.9 (31.2 – 46.5)	44.2 (34.4 – 54.1)
Cues of Interest		
≤ 8th grade level	<b>5.6 (3.2 – 8.1)</b>	<b>13.2 (10.3 – 16.1)***</b>
≥ High School Level	<b>5.8 (2.5 – 9.1)</b>	<b>13.4 (9.4 – 17.5)*</b>
Emotional Statements		
≤ 8th grade level	<b>26.8 (18.7 – 34.9)</b>	<b>19.4 (15.2 – 23.7)*</b>
≥ High School Level	25.6 (18.0 – 33.3)	20.7 (15.5 – 26.0)
Reassurance Statements		
≤ 8th grade level	<b>17.8 (12.1 – 23.5)</b>	<b>12.1 (9.5 – 14.7)*</b>
≥ High School Level	17.0 (11.4 – 22.6)	12.9 (8.9 – 17.0)
Concern Statements		
≤ 8th grade level	6.9 (4.5 – 9.3)	6.2 (4.8 – 7.6)
≥ High School Level	<b>8.5 (6.0 – 10.9)</b>	<b>6.3 (4.6 – 8.1)*</b>
Approval Statements		
≤ 8th grade level	5.6 (3.2 – 8.0)	<b>3.3 (1.9 – 4.7)+</b>
≥ High School Level	3.0 (1.7 – 4.4)	<b>4.2 (3.2 – 5.1)+</b>
Orientation Statements		
≤ 8th grade level	28.9 (22.8 – 35.0)	26.9 (21.2 – 32.5)
≥ High School Level	24.8 (18.8 – 30.7)	18.2 (12.0 – 24.4)

Scores adjusted for nesting of patients within provider, gestation at visit and visit length

+p<.1; \*p<.05; \*\*p<.001; \*\*\*p<.0001



# In Sum

Patient interaction changed in ways consistent with greater engagement and empowerment for women *with and without* significant literacy deficits.



# Possible Caveat

Patient Satisfaction may not work as expected

	<b>Baby Basics</b>	<b>Healthy Babies Health Moms</b>
	<b>Means (CI)</b>	<b>Means (CI)</b>
• < 8 <sup>th</sup> grade	1.61 (1.49 – 1.73)	1.75 (1.58 – 1.93) <sup>+</sup>
• ≥ 8 <sup>th</sup> grade	1.60 (1.34 – 1.86)	1.48 (1.23 – 1.73)

(lower score indicates higher satisfaction); <sup>+</sup>p<.10

Satisfaction with HBHM was lower for patients with literacy deficits suggesting that there may be a cost in undertaking unfamiliar and challenging tasks. This was not apparent among patients with adequate literacy levels – it may even be the opposite.



What now?