USE OF A CELL PHONE APP TO INCREASE MULTIVITAMIN WITH FOLIC ACID AMONG YOUNG RURAL WOMEN

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SIGNIFICANCE

•Preconception intake of folic acid significantly decreases the incidence of neural tube defects

• Up to 50% of pregnancies are unplanned with the vast majority of those pregnancies occurring among 18-24 year olds

• Less than half of reproductive age women take a multivitamin daily

• Use of mobile apps in the format of cell phone apps have been noted to increase medication intake

METHODOLOGY

- Convenience sample of 51 women ages 18-24 who presented for family planning services at a rural southern health department; 41 women completed the study

• Demographic data collected: age, race, highest grade completed, number of times she takes a multivitamin each week

• Pre-and post-test survey to determine acceptance of technology using the Unified Theory of Acceptance and Use of Technology 2

FINDINGS

VITAMIN INGESTION AT BEGINNING AND END, HISPANICS

		DAYS VIT TAKEN AT END			
		2	6	7	Total
DAYS VIT TAKEN BEGIN	0		0 0	1	1
	1		0 1	0	1
	2		1 0	1	2
	3		0 1	0	1
	7		0 0	1	1
Total			1 2	3	6

VITAMIN INGESTION AT BEGINNING AND END, BLACKS

		DAYS VIT TAKEN AT END						
		2	3	4	5	6	7	Total
DAYS VIT TAKEN BEGIN	0	1	3	1	3	2	6	16
	2	0	0	1	0	2	0	3
	3	0	0	0	0	0	1	1
	4	1	0	0	0	0	0	1
	7	0	0	0	0	0	1	1
Total		2	3	2	3	4	8	22

VITAMIN INGESTION AT BEGINNING AND END, WHITES

		DAYS VIT TAKEN AT END				Total
		4	5	6	7	
DAYS VIT TAKEN BEGIN	0	1	2	1		3 7
	1	0	1	0		1 2
	7	0	0	0		3 3
Total		1	3	1		7 12

At the beginning of the study, average ingestion of vitamins was 1.45 days per week; at the end the study, average ingestion of vitamins was 5.63 days per week, an increase of 59.7%.

The Unified Theory of Acceptance of Technology 2 was used to evaluate acceptance of the technology. The survey was scored using a Likert scale with "strongly agree" as "7" and "strongly disagree" as "1". There were not significant differences between the scores before and after the intervention on any of the measures.

IMPLICATIONS FOR PRACTICE

• Increase in use of mobile apps as reminders can help young women who are at increased risk for unplanned pregnancy to take folic acid daily prior to conception

• Globally, the health care cost of caring for children with neural defects could be lowered

• Technology could be used to increase knowledge for women to take 0.4mg of folic acid daily as well as a teaching tool for other health issues.

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DISCUSSSION

• It is well established that preconception folic acid reduces incidence of neural tube defects

• It is imperative that we continue to find methods to increase multivitamin intake among reproductive age women

• Technology provides great potential to improve multivitamin intake thus having potential on maternal and fetal health as well as decreasing the financial burden of caring for children with neural tube defects