Does BMI influence the impact of an educational video module on gestational weight gain?

Gina Milone MD[1]; Mahesh Tiwari BS[1]; Hailey McInerney MD[2]; Brynn Franz[3]; Katya Potkin BS[1]; Malini D. Persad MD[4], MPH; Kimberly Herrera MD[1]

Stony Brook University Hospital[1], Icahn School of Medicine at Mount Sinai West[2], University of South Carolina[3], Penn State Hershey Medical Center[4]

Stony Brook Medicine

Society for Maternal-Fetal Medicine

Background

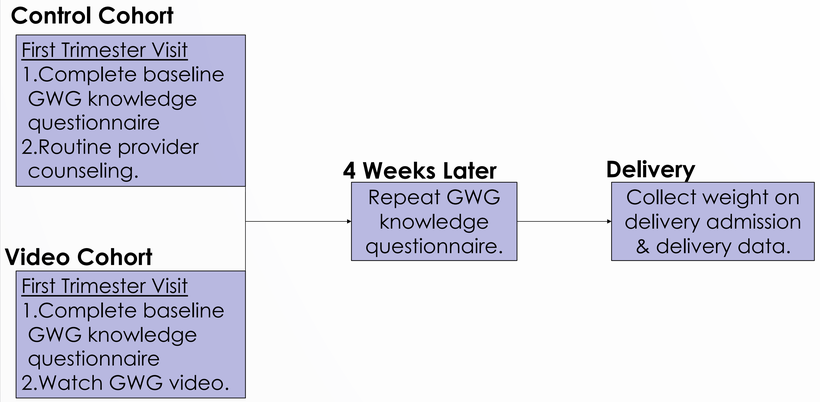
- Approximately 50% of women gain excessive weight during pregnancy, and another 20% of women do not gain enough
- Overweight and obese women have the highest prevalence of excessive gestational weight gain (GWG)
- GWG counseling must be improved: approximately one third of patients receive no counseling at all
- Lack of counseling is likely multifactorial

Objectives

To determine if a video module impacts GWG differently for different BMI classifications.

Study Design

- Prospective cohort study conducted from February-October 2019
- Patients were recruited from a large academic practice during the first trimester



- Patients were stratified by their pre-pregnancy BMI.
- The percentage of patients who gained the appropriate amount of weight was calculated for each BMI class, in each group.

Results

Table 1. Demographics for participants in both the control and video cohorts.

	Control Cohort n=79	Video Cohort n=76	p-value
Race			
Caucasian	44 (55.7)	51 (67.1)	0.06
Black	4 (5.1)	10 (13.2)	
Asian	7 (8.9)	3 (3.9)	
Hispanic	20 (25.3)	11 (14.5)	
Other	4 (5.1)	1 (1.3)	
Education			
<High school	5 (6.3)	2 (2.6)	0.016
High school	32 (40.5)	15 (19.7)	
College	22 (27.8)	33 (43.4)	
Graduate school	20 (25.3)	26 (34.2)	
Marital Status			
Single	28 (36.4)	24 (31.6)	0.532
Married	49 (63.6)	52 (68.4)	
Pre-Pregnancy Weight (kg)	72.65±21.7	75.2±20.7	0.424
Pre-Pregnancy BMI (kg/m²)	27.6±7.6	27.8±7.5	0.787
Age (years)	30.4±5.2	31.9±4.5	0.065

	Control Cohort n=79	Video Cohort n=76	p-value
Income (U.S. Dollars)			
<30k	16 (20.8)	11 (14.9)	0.725
30-50k	15 (19.5)	12 (16.2)	
50-80k	13 (16.9)	16 (21.6)	
80-100k	7 (9.1)	10 (13.5)	
>100k	26 (33.8)	25 (33.8)	
Insurance			
None	1 (1.3)	0 (0)	0.206
Medicaid/Medicare	39 (49.4)	29 (38.2)	
Private	39 (49.4)	47 (61.8)	
Provider			
Residents	15 (19)	4 (5)	0.034
General Obstetricians	22 (28)	16 (22)	
Maternal-Fetal Medicine	14 (18)	18 (24)	
Certified Nurse Midwives	28 (35)	36 (49)	

Table 2. GWG stratified by BMI class, for the control and video cohorts.

	Underweight (BMI <18.5kg/m²)	Normal Weight (BMI 18.5-24.9kg/m²)	Overweight (BMI 25.0-29.9kg/m²)	Obese (BMI >30.0kg/m²)	p-value
Control Cohort: Gained Recommended Weight n (%)	0 (0.0%)	13 (46.4%)	1 (8.3%)	4 (16.0%)	***0.007***
Video Cohort: Gained Recommended Weight n (%)	0 (0.0%)	7 (30.4%)	7 (30.4%)	3 (15.0%)	0.483

	Control Cohort (Overweight)	Video Cohort (Overweight)	p-value
Gained Recommended Weight n (%)	1 (8.3%)	7 (30.4%)	0.216
Did Not Gain Recommended Weight n (%)	11 (91.7%)	16 (69.6%)	

Conclusion

- Use of a video module did not improve patient adherence to recommended GWG guidelines, regardless of their pre-pregnancy BMI.
- When looking at just overweight patients, there was a visible improvement in the percentage of patients who gained the recommended amount of weight in the video cohort.
- This improvement was not statistically significant.
- Video module may improve GWG outcomes in overweight patients, however a larger sample size is needed to further assess.

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