

Utilization of the 5 As Framework to Guide Consent and Discussions About Gestational Weight Gain in an Antenatal Care Setting: A Quality Improvement Project

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Abstract

Background: Gestational weight gain above or below the recommendations by the Institute of Medicine has been shown to increase risks of adverse outcomes. However, guidance around weight gain in pregnancy is inconsistent, may be influenced by anti-fat bias, and can lead to feelings of shame and stigma for patients when discussed in an insensitive manner. The 5 As framework has been shown to be a simple and effective framework for conducting weight management discussions and is associated with improved provider-patient interaction and patient satisfaction with this challenging topic.

Setting/Local Problem: Midwives in an urban academic health center practice identified inconsistent patient teaching and expressed a desire to provide more patient-centered, trauma-informed, and consistent messaging around gestational weight gain.

Methods: Midwives were sent the The Attitudes Toward Obese Persons (ATOP) and Beliefs About Obese Persons (BAOP) surveys as a tool for self-reflection about anti-fat bias. They then watched a presentation providing education about the project and the 5 As framework for discussing gestational weight gain. Patients were to provide consent before being weighed. The midwives utilized an electronic health record template “dot phrase” to guide and document conversations around gestational weight gain during the initial prenatal visit. These interventions were tracked over three Plan-Do-Study-Act cycles. The specific aims of this project were to ask patients for consent before weighing and to use the dot phrase in 85% of all initial prenatal visits.

Results: All nine consistently-scheduled midwives participated in this project. Eight of the midwives (89%) took the ATOP survey and five (56%) took the BAOP survey. The mean score for the midwives who took the ATOP survey was 86.25. The mean score for the midwives who took the BAOP survey was 32.6. Out of a total of 69 patients, 58% were asked for consent before being weighed during the intervention period. The dot phrase was used to guide and document conversations around gestational weight gain in 83% of the new OB visits.

Conclusion: This improvement project did not meet the aim of 85% compliance with dot phrase usage and of consent before being weighed. However, midwives in the practice found the project interventions useful and expressed plans to continue multiple aspects of the project forward into their practice. Sustainability of this project in its current form is questionable due to support staff challenges, but it may be modified to meet the needs and desires of the midwives to ensure sustainability.

Table of Contents

Problem Description.....	5
Available Knowledge.....	5
Rationale.....	11
Specific Aims.....	12
Context.....	13
Interventions.....	14
Study of the Interventions.....	16
Measures.....	16
Analysis.....	16
Ethical Considerations.....	17
Results.....	17
Summary.....	20
Interpretation.....	21
Limitations.....	22
Conclusions.....	23
References.....	25
Appendix A.....	29
Appendix B.....	30
Appendix C.....	31
Appendix D.....	32
Appendix E.....	34
Appendix F.....	35

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Problem Description

Nutrition, dietary intake, body image, and weight gain during pregnancy are topics that are challenging for providers to address and may cause emotional distress to patients to discuss (Christenson et al., 2020; Vanstone et al., 2017; Washington Cole et al., 2017). There are emotional and physical implications for patients when these topics are brought up in insensitive ways, particularly for patients who have a history of or are currently experiencing disordered eating, as well as for people in larger bodies who may experience weight stigma (DeJoy et al., 2016). These implications can include avoiding or delaying care, decreased quality of life, and adverse psychological effects, along with increased gestational weight gain in pregnant people (Incollingo Rodriguez et al., 2020; Wu & Barry, 2017). Research shows that gestational weight gain (GWG) above or below the recommended guidelines increases risks of adverse fetal and maternal outcomes, such as preterm birth, macrosomia, and cesarean delivery. Messaging around GWG and activity is inconsistent and influenced by anti-fat bias in U.S. society and medicine (Vanstone et al., 2017; Weeks et al., 2020).

Midwives in an urban academic health center expressed a desire to provide more patient-centered, trauma-informed, and consistent messaging around GWG in their practice. The purpose of this project was to increase awareness of provider anti-fat bias using peer-reviewed anti-fat bias assessment tools and standardize GWG discussions using a consent-based framework.

Available Knowledge

The National Academy of Medicine (NAM), formerly the Institute of Medicine (IOM), updated the recommendations for GWG in 2009 based on patient body mass index (BMI). Current evidence from a large meta-analysis shows that weight gain below these recommendations results in higher risks of small for gestational age (SGA) infants and preterm birth, while weight gain above the

recommendations results in a higher risk of large for gestational age (LGA) infants, macrosomia, and cesarean delivery. However, the nuances within each of these risk categories are unclear. For instance, the evidence was inconsistent regarding the impact of GWG outside the NAM recommendations for people with gestational diabetes mellitus (GDM). Additionally, there is a lack of standardization in methodology for reporting multiple outcome measures, such as no differentiation between elective and emergency cesarean delivery (Goldstein et al., 2017).

The benefits of nutrition and movement during pregnancy are well demonstrated in the literature; however, it is challenging to identify which interventions are patient-centered and effective (Cantor et al., 2021; Grenier et al., 2021). Patients bring a wide variety of experiences, barriers, perceptions, and levels of understanding about nutritional needs and physical movement to pregnancy (Vanstone et al., 2017). Qualitative research on the experiences of pregnant people shows that providers report providing dietary and exercise-related guidance at much higher rates than patients report receiving this information. Patients in this study reported feelings of being overwhelmed or confused by dietary and exercise guidelines during pregnancy; and personal barriers to implementing the dietary or exercise recommendations during pregnancy were not taken into account by their providers (Grenier et al., 2021). These anecdotes indicate that even if the information is provided, patients are often unable to absorb, understand, or implement changes in their daily lives.

Weight bias plays a significant role in the experience of pregnant people, specifically when having conversations around GWG, nutrition, and movement. Research has shown that providers have negative attitudes towards patients with higher BMIs compared to those with BMIs within in the “normal” range (DeJoy et al., 2016). Several studies have noted a variety of negative and dehumanizing experiences reported by pregnant people in larger bodies (DeJoy & Bittner, 2015; Furber & McGowan, 2011; Nyman et al., 2010). A qualitative study found that nearly 20% of the 500 participants reported experiences of weight stigma in pregnancy and postpartum that resulted in feelings of judgment, shame, and guilt (Incollingo Rodriguez et al., 2020). A systematic review found that weight stigma and

anti-fat bias can lead to healthcare avoidance and delays in needed care (Wu & Barry, 2017). The authors also found that weight stigma was positively associated with difficulty losing weight, medication adherence challenges, and decreased quality of life, as well as psychological adverse effects such as anxiety, depression, substance abuse, and eating disorders. In pregnancy, weight stigma is associated with increased GWG (Incollingo Rodriguez et al., 2020). Adding to the burden of weight bias, frequent weighing and insensitive discussions around weight may be emotionally and physically damaging. More than 7% of pregnant people are actively experiencing disordered eating and many more may have a history of disordered eating or a challenging relationship with body image, all of which may be unknown to the provider (Martínez-Olcina et al., 2020).

Discussions and interventions around nutrition and movement in pregnancy may be important to ascertain goals, barriers, knowledge, and services or resources that would be helpful for each individual (Grenier et al., 2021). However, providers may find it difficult to address these topics, or worry about doing so in a way that does not offend or traumatize patients. A descriptive study focused on assessing the attitudes and beliefs about obesity and GWG counseling during pregnancy found that 17% of the midwives surveyed avoided talking about GWG at all because of discomfort with the topic or concern that it may upset the patient. One third of participants found this topic more challenging to address than smoking or alcohol use, and almost half of the participants felt like they did not have the tools and knowledge to counsel patients about GWG, nutrition, and exercise in pregnancy (Christenson et al., 2020). Provider discomfort may be magnified by negative attitudes and stigma around obesity and these factors may contribute to ineffective communication. It is necessary for providers to be aware of their own biases and have a clear, trauma-informed, consent-based tool to approach the conversation of GWG, nutrition, and exercise during pregnancy.

Anti-fat bias among providers can be assessed using validated and peer-reviewed tools to identify levels of bias pre- and post-intervention, as well as to provide feedback to providers on their levels of bias regarding pregnant people of larger size. The Attitudes Toward Obese Persons Scale

(ATOP) (Appendix D) is a validated tool that includes 20 questions measuring stereotypical attitudes about obesity. Questions are answered using a six-point Likert scale evaluating the extent of agreement or disagreement with each statement. Higher scores reflect more positive attitudes towards people with obesity, while lower scores indicate more negative attitudes. This scale has established internal reliability in adult populations with a reliability range of .80 to .84 (Allison et al., 1991; Chang et al., 2018; Puhl et al., 2010).

The Beliefs About Obese Persons Scale (BAOP) (Appendix E) is a short eight-question tool that measures beliefs about the underlying causes or reasons for obesity. This tool also uses a six-point Likert scale to assess the extent of agreement or disagreement with each statement. Higher scores reflect beliefs that obesity is not under individual control, while lower scores indicate beliefs that obesity is caused by individual factors. This scale has a reliability range of .65 to .82. (Allison et al., 1991; Chang et al., 2018; Puhl et al., 2010).

A challenging aspect of assessing anti-fat bias is that there are many tools available, with varying levels of validity. The literature is mixed, with no one tool identified as being the most appropriate for this area of study (Lawrence et al., 2021). The ATOP and BAOP tools were created for use in the general population and were not specifically designed for assessing anti-fat bias in healthcare workers (LaCroix et al., 2017). While there are tools designed for healthcare professionals, the majority are designed for nurses while others center on patients being seen for weight loss treatments and relate to treatment compliance (LaCroix et al., 2017). Despite unproven generalizability, the ATOP and BAOP tools have been used in anti-fat bias research among nurses, medical students, midwives, obstetricians, and other healthcare workers (Christenson et al., 2020; Gujral et al., 2011; Lawrence et al., 2021). A systematic review of weight bias questionnaires rated tools on multiple psychometric measures, including internal consistency, test-retest reliability, theoretical clarity, content validity, structural validity, convergent validity, discriminant validity, and sensitivity to change. Researchers found that the ATOP tool performed well in six of eight measures, while the BAOP performed well in four of six

measures. Neither scale met the threshold for discriminant validity, defined as “the degree to which scores on measures of distinct constructs are uncorrelated or weakly correlated” (p. 6). Additionally, neither tool met the test-retest reliability threshold of $r \geq 0.70$. Test-retest reliability refers to the “tendency of an instrument to produce similar scores in the same individuals on different occasions” (p. 6) and should be considered when assessing pre- and post-intervention (LaCroix et al., 2017). However, 37 of the 40 tools reviewed also failed to meet this threshold. Therefore, this weakness is not unique to these tools, but rather is a common weakness among weight-bias questionnaires. The BAOP also did not meet the threshold for structural validity or sensitivity to change. Both the ATOP and BAOP tools performed better than average in the analysis of available tools (LaCroix et al., 2017) and are the best of the tools available. These tools were selected for this project due to wide usage, ease of use for the participant, and available data on scoring methodology.

While it is not strictly necessary to use these tools simultaneously, when used together, they provide a greater understanding of the attitudes and beliefs that participants hold towards people with obesity and the relationship between the two (Gujral et al., 2011). The ATOP and BAOP tools have been widely used to measure weight stigma among healthcare workers, including medical students and nurses. Studies using these tools to measure attitudes and beliefs before and after implementing an educational intervention report an association with decreased negative attitudes and beliefs (Gujral et al., 2011; Oliver et al., 2020; Poustchi et al., 2013). For example, one study examining the attitudes and beliefs of nurses towards patients in larger bodies using the ATOP and BAOP found that bariatric sensitivity training was associated with improved nursing attitudes towards patients at higher weights, but did not improve beliefs (Gujral et al., 2011).

The 5 As framework originally consisted of the steps Assess, Advise, Agree, Assist, and Arrange to guide conversations around smoking cessation (Washington Cole et al., 2017; Welzel et al., 2018). The Canadian Obesity Network utilized the same tool principles but altered the steps with the goal of discussing weight management discussions with a patient-centered approach, using the steps: Ask,

Assess, Advise, Agree, and Assist. These changes were important because asking for permission is an important tenet of motivational interviewing, helps the patient be more engaged in the process, and results in more respectful conversations with greater patient satisfaction (Vallis et al., 2013). This method has been shown to be a simple and effective framework for conducting weight management discussions and is associated with improved provider-patient interaction and patient satisfaction with this challenging topic (Vallis et al., 2013; Washington Cole et al., 2017; Welzel et al., 2018). These changes allowed for a respectful approach and increased patient self-efficacy regarding their care. The framework includes asking patients in a non-judgmental manner for permission to discuss the topic of weight, assessing their level of knowledge and body habitus as it relates to GWG, and advising on the guidelines, risks, and benefits. The remaining steps are agreeing on goals and making a plan, then assisting the patient in identifying barriers and giving aid and resources (Vallis et al., 2013; Weeks et al., 2020).

In an observational study examining the use of this tool in prenatal care, researchers found that the 5 As tool was effective at initiating counseling around gestational weight gain and nutrition. They also found that counseling using the 5 As was significantly associated with lower GWG compared to no counseling (N=120, p=0.001; Washington-Cole et al., 2017). Researchers noted that providers who used this tool most consistently used the “ask” and “advise” steps. Authors speculated that time constraints were the reason all five steps were not always used. Regardless, even partial use of the 5 As tool resulted in significant results: use of one of the 5 As in counseling resulted in an average of 5.6 fewer pounds of GWG. Counseling using two or more of the 5 As resulted in an average of 11.8 fewer pounds of GWG. Additionally, the odds of GWG exceeding the NAM recommendations were 68-76% decreased with use of the 5 As compared to no counseling (Washington-Cole et al., 2017).

A pilot study evaluating the impact of the 5 As tool on GWG discussions found that patients were twice as likely to discuss GWG, and more than three times as likely to receive specific information about GWG recommendations for their pregnancy (Weeks et al., 2020). Similar to the

Washington-Cole et al. study, researchers found that “Ask” and “Advise” were the most commonly used components of the 5 As. The authors noted they were unsurprised by this result since those components are the most straightforward and familiar to providers. Additional provider training in the 5 As tool was recommended to increase rates of all components in counseling. Regardless, most of the healthcare providers in this study reported that the 5 As increased their knowledge and confidence to initiate discussions around GWG with their patients (Weeks et al., 2020). These studies illustrate the value in utilizing the 5 As framework as a patient-centered and effective way to initiate and guide discussions around GWG during pregnancy.

Rationale

The Institute for Healthcare Improvement (IHI) Model for Improvement (MFI) is a simple and targeted model for implementing improvement changes (IHI, 2021). The model consists of two parts. The first is setting clearly defined aims and establishing quantitative measures to measure change and determine if it meets the established criteria for improvement. Then the specific change that will result in improvement is selected. The second part of the MFI is testing changes through a series of short Plan-Do-Study-Act (PDSA) cycles. Several cycles are conducted, the results are evaluated, and further cycles are changed accordingly (IHI, 2021). This method allows for implementation of the change on a small scale, identifying the successful or problematic portions of the change, and allowing for fine-tuning the change to achieve the desired results.

While there are other models and frameworks that have been used to achieve improvement changes, the IHI MFI has the advantage of being not only simple and effective, but also allowing for rapid iteration (Lee & Larson, 2014). Research has shown the IHI MFI is an effective and efficient model and the PDSA cycle is associated with meaningful improvements in clinical settings (Henry et al., 2021; Lee & Larson, 2014; Poustchi et al., 2013). It is specifically suited for this project given the ability to calibrate improvement implementation and illustrate the effects of change in a relatively short period of time. A cause-and-effect analysis (Appendix A) was conducted by identifying the gaps in the

current processes around GWG discussions and potential challenges of implementing the project. Some of the identified causes of poor implementation are appointment time constraints, disruption of MA workflow, and inadequate resources. Feedback will be solicited after each cycle and further cycles will be adjusted according to preliminary results.

Trauma informed care (TIC) is rooted in the knowledge that a high proportion of patients seeking reproductive healthcare have experienced some form of trauma either in childhood or as an adult. Experiences in healthcare can be emotionally challenging and anxiety producing for patients, and providers and patients may not always anticipate which procedures or interactions may cause a trauma response (Owens et al., 2022). Discussions around GWG may be a triggering experience for patients due to provider weight bias and lack of patient-centered care (Incollingo Rodriguez et al., 2020). Research has shown the benefits of using a trauma-informed approach to care for all patients regardless of known or disclosed trauma, with consent being a key part of that approach (Owens et al., 2022). Using a patient-centered framework for GWG that starts with obtaining consent for the discussion allows for TIC to be implemented throughout this aspect of patient care.

Specific Aims

There were three specific aims for this project. First, in order to bring awareness to potential anti-fat bias among the midwives, 100% of the full-time midwives involved in outpatient antepartum care at this center would complete the ATOP and BAOP anti-fat bias assessment tools by September 20, 2022. Second, by the end of the third PDSA cycle, patients would be asked for consent before being weighed at 85% of new OB (NOB) visits. Third, a standardized note-writing electronic health record (EHR) template, hereafter referred to as a “dot phrase” (Appendices B & C) would be used to guide and document discussions around GWG at a total of 85% of NOB visits throughout the three PDSA cycles. This dot phrase was created using the 5 As framework to guide trauma-informed, consent-based discussions around GWG, nutrition, and movement.

Methods

Context

This quality improvement project took place in an outpatient clinic of a midwifery practice affiliated with a large public academic health center located in an urban area in the Pacific Northwest. The outpatient practice consisted of nine consistently scheduled nurse-midwives, with one registered nurse (RN) and one medical assistant (MA) in clinic to assist with rooming patients. There were several per-diem midwives who occasionally saw patients in the clinic; these midwives were not included in the intervention for continuity purposes. Student nurse-midwives and family nurse practitioner students often participated in clinical experiences in the clinic and provided patient care under supervision of the midwives. Overall, midwives conducted approximately 10 new obstetric (NOB) visits with pregnant patients weekly with approximately 120 patients seen per week overall. The majority of new patient intake visits occurred before 16 weeks of gestation; however, some patients began care elsewhere and transferred care later in their pregnancy. This intervention was limited to initial prenatal visits before 28 weeks of gestation. Most patient visits at this clinic were for prenatal and postpartum care; other visits were for well-person and gynecological care visits. The clinic accepted Medicaid as well as private insurance. The clinic also served patients who were employees of the academic health center. All patients at the clinic intentionally sought midwifery care.

Each patient had an RN intake visit prior to their initial prenatal visit, typically conducted virtually. New patient information was collected and online educational materials were provided at that time. This included resources such as dietary intake recommendations during pregnancy. It was unclear how many patients actually viewed or utilized these resources. In the clinic, MAs were responsible for weighing and rooming all patients before appointments. Initial prenatal appointments with the midwife were scheduled for forty minutes and were usually conducted in person, although some patients who were transferring care may have had a virtual new patient visit. Patients with virtual new patient visits

were not included in this project since they were past 28 weeks of gestation. The practice midwives conducted the new prenatal visits, which was typically when the majority of the discussion around gestational weight gain (GWG) and nutrition took place. The manner in which this information was provided prior to this intervention varied widely between practitioners. The midwives expressed a desire for a trauma-informed, patient-centered, and standardized approach to ensure the information was consistently provided in a manner that met patient needs.

Interventions

This project was conducted over three PDSA cycles; each cycle lasted three weeks. In September 2022, an email containing a link to the ATOP and BAOP scales and a request to complete within one week was sent to all participating midwives in the practice. On September 20, 2022, a brief description of the project was given at the midwifery practice meeting. Additionally, a brief video describing the aims of the project, including information about the 5 As model, how this model is applicable to GWG discussions, and an explanation of the EHR dot phrase were sent via email to all participants, along with information on the project timeline. The student nurse-midwives who planned to conduct clinical experiences at the clinic during the project implementation were also sent the project explanation video, along with project timeline information. The dot phrase was added to the EHR database and shared with all participating midwives and midwifery students conducting care in the clinic setting.

During the first PDSA cycle, a text message was sent out the morning of each clinic day to the midwife(ves) identifying which NOB visits were candidates for the project and reminding them to apply the intervention. Since the MAs conducted patient weighing and rooming, they were asked by the midwives to ask NOB patients for permission before weighing them. The midwife then asked the patient during the visit for permission to weigh them during the remainder of the pregnancy and engaged in GWG discussions using the dot phrase template. The discussion was then charted using the dot phrase. If the patient declined to be weighed or agreed to be weighed but did not wish to know their

weight, this was documented in the dot phrase as well as in the “pink sticky,” which is an internal EHR note that is used for inter-staff communication and reminders about patient preferences and needs. Hard copies of the dot phrase were put in each clinic room and in the office to assist with patient conversations and charting. Weekly email updates were sent to all participating midwives, which oriented them of the project timeline and provided updates and specific reminders.

After the second week of cycle one, feedback was received that one of the questions in the dot phrase, “Patient’s thoughts and feelings about their relationship with their body”, felt ambiguous and vague to several midwives and they noted it was difficult to know how to ask a patient about their relationship with their body. Based on that feedback and with input and approval from multiple participating midwives via email, it was decided to change this portion of the dot phrase to, “Patient would like the midwifery team to know *** about their relationship with food and their body.” This change was implemented immediately rather than waiting for the beginning of cycle two. During cycle one it was also noted that the pink sticky was not always updated if a patient preferred not to know their weight. This reminder was sent in the weekly email updates. Feedback was solicited during the final and third week of cycle one, but no additional feedback was received.

The second PDSA cycle proceeded using the edited dot phrase. Text reminders were sent each morning, and the weekly emails continued. As in the first cycle, the MA was requested by the midwife to ask for consent to weigh the patient when rooming them at the NOB visit. The midwives continued to ask for consent to weigh the patient throughout the remainder of their pregnancy and used the dot phrase to guide and document discussions about GWG. During the third and final week of cycle two, feedback was solicited from the midwives, but there were no suggestions for desired changes. Originally, the plan was to discontinue the daily text reminders at this point; however, several midwives noted they found the reminders helpful and requested they continue. Therefore, the intervention was not modified after cycle two.

During the third and final PDSA cycle, the daily text reminders and weekly emails continued. The midwives continued to implement the intervention as noted in the previous cycles. After the conclusion of the final PDSA cycle, overall project feedback was requested and received. Midwives answered what they liked about the project, what they disliked, and which part (s), if any, they planned to continue to incorporate into their practice.

Study of the Interventions

The clinic patient schedule was reviewed each day to identify appropriate patient candidates for project participation. Chart reviews were conducted weekly to assess the frequency of dot phrase use and how often patients were being asked for consent before being weighed. Weekly data was tracked in a spreadsheet. The pre-intervention ATOP and BAOP scores were calculated and documented. The data were plotted into a run chart after the final PDSA cycle was concluded.

Measures

The primary outcome measure for this project was the percentage of patients who had GWG discussions with documentation using the 5 As dot phrase during all three PDSA cycles. The secondary outcome measure was the percentage of patients who were asked for consent before being weighed. The primary process measure was the number and percentage of midwives who completed the ATOP and BAOP tools and viewed the video about the project and intervention. Balancing measures for this project included increased clinic workflow burden of the project on clinic staff, specifically midwives and MAs. Other balancing measures were patient interest and consent rates of being weighed and discussing GWG.

Analysis

The completion rates of the ATOP and BAOP tools were analyzed before the first PDSA cycle. Once weekly chart reviews were conducted. The charts of all NOB visit patients who qualified for the project were analyzed to identify whether the CNM used the dot phrase to document the discussion using the 5 As framework. In addition, if the patient declined to be weighed the pink sticky note was

viewed to ensure patient declination was documented for staff awareness. The data on whether the MA asked the patient for consent before weighing them were also collected. The data on usage of the dot phrase and whether the patients were asked for consent before being weighed were tracked in a spreadsheet and plotted into a run chart to visualize changes throughout each cycle.

Ethical Considerations

Permission for this research was requested via a request of determination submitted to the Internal Review Board (IRB). The IRB concluded that this was a quality improvement project and did not consist of human subjects research and granted permission to proceed. Patient confidentiality was maintained throughout the process. Only the charts of patients who potentially qualified for the project were reviewed and no protected health information identifiers were collected. CNM confidentiality was maintained through anonymized results of the ATOP and BAOP tools.

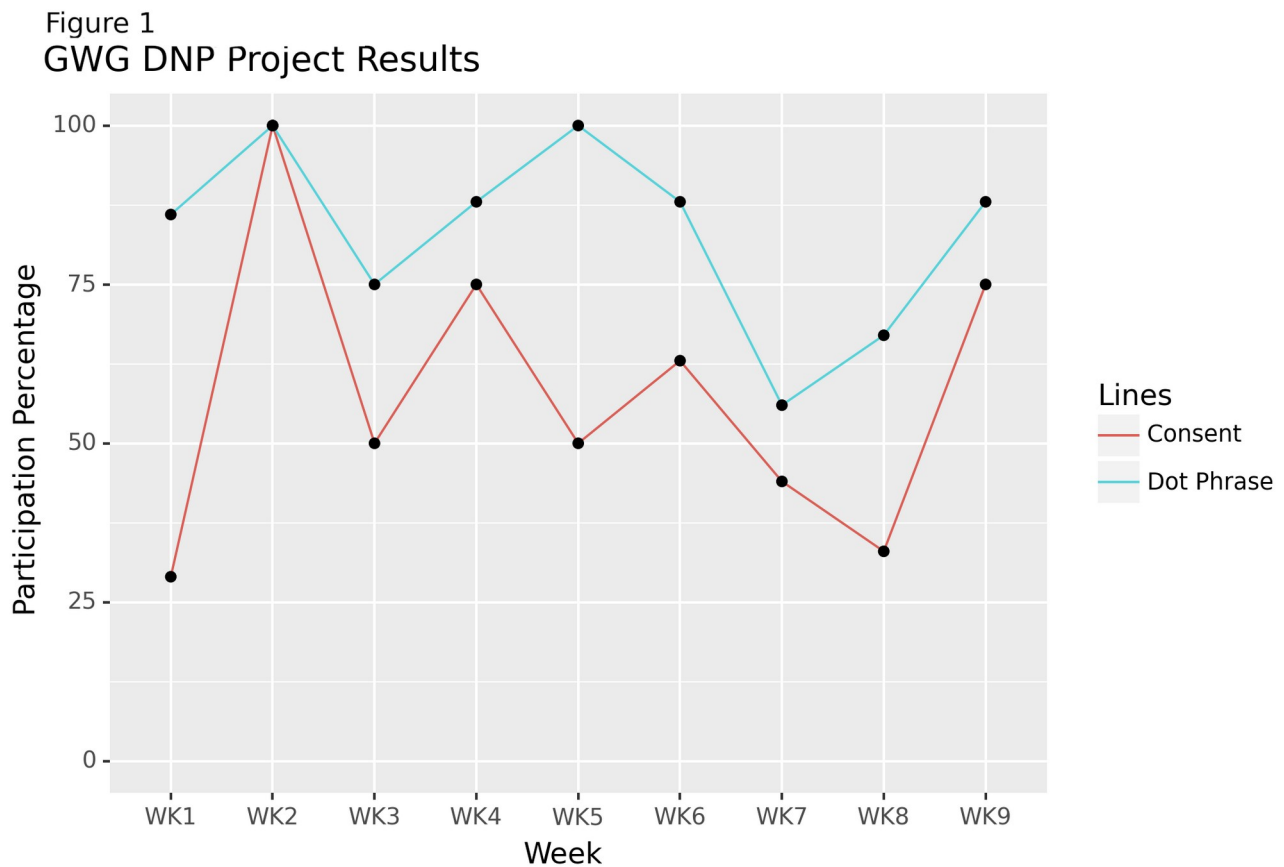
Results

Eight of the nine participating midwives, or 89%, took the ATOP survey and five of the nine, or 56%, took the BAOP survey. The surveys were taken anonymously. The mean score for the eight midwives who took the ATOP survey was 86.25, with the highest score 109 and the lowest score 63. ATOP scores range from 0 to 120, with higher scores indicating more positive attitudes toward obese people (Puhl et al., 2010). The mean score for the five midwives who took the BAOP survey was 32.6, with the highest score 37 and the lowest score 28. The scores for the BAOP scale range from 0 to 48, with higher scores reflecting beliefs that obesity is not under individual control (Puhl et al., 2010).

The initial plan was to administer and score the assessments before the first PDSA cycle and after the completion of the third cycle and compare the results. However, it was ultimately decided to use the ATOP and BAOP surveys as a tool for self-reflection on personal attitudes and beliefs about people in larger bodies. Additionally, there was an unforeseen conflict in that a similar project was being carried out at a sister site and also involved several of the midwives participating in this GWG project. Therefore, to avoid duplication between the projects and undue burden on the midwives, the

ATOP and BAOP surveys were sent out before the first cycle but were not resent after the final cycle. Several of the midwives noted they appreciated the experience of taking the ATOP and BAOP scales as a self-reflection exercise.

During the nine weeks, there were a total of 69 NOB patients who were candidates for this project. A total of 40 patients, or 58%, were asked for consent before being weighed over the course of all three cycles. The dot phrase was used to guide and document conversations about GWG in 57 (83%) of the NOB visits. The results in percentages of both primary measures by week are outlined in figure 1.



In the feedback throughout the project, it was noted that there were some challenges that affected the implementation of the intervention. First, although the midwifery students were included in

the project education and updates, they would often forget to implement the intervention. On clinic days when student midwives conducted the NOB prenatal care, the intervention was less likely to be used. An additional challenge was the lack of a consistent MA staff. The clinic had stable MA staff in the past; however, there have been severe staffing shortages throughout the COVID 19 pandemic. The MAs who worked in the midwifery prenatal clinic often rotated between several different clinics. There was rarely continuity in the MA staff; therefore, the burden often fell on the midwife to inform and remind the MA of the intervention. This was a significant barrier since the MAs were integral to the outcome of asking patients for consent before weighing them.

Feedback received from the midwives via informal email survey after the final cycle of the project was overwhelmingly positive. Several midwives noted that they enjoyed the project. Specific aspects of the project and dot phrase that midwives liked included that the project focused on consent, autonomy, and the patient experience rather than GWG recommendations alone. Multiple midwives noted they liked that it opened a dialogue to address disordered eating and body dysmorphia in a patient-centered way. Through chart review it was noted that several patients disclosed histories of disordered eating or body image challenges. Midwives reported patients seemed to appreciate having the opportunity to discuss this in the context of their pregnancy. While all of the patients agreed to be weighed throughout their pregnancy, several requested not to know their weight and many expressed goals focused on healthy behaviors rather than gestational weight gain numbers.

Aspects of this project that the midwives found challenging included charting and system constraints. Several midwives noted that with the many items that needed to be addressed during the NOB, it was hard to give the conversation the time they felt it deserved. Other concerns included the dependence on the MA and students. The necessity of reminding other personnel about the project added to the CNM workload. Finally, one midwife noted she felt there was a lack of resources to provide to patients to mitigate the identified barriers. Midwives planned to carry forward some aspects of the project such as asking for consent and preferences around being weighed. Several midwives

planned to continue with some variance of the question “Is there anything you would like the midwives to know about food and your body?” Finally, the midwives planned to continue to use patient-focused questions such as asking patients about their specific goals for nutrition and movement during pregnancy.

Discussion

Summary

This project provided midwives at an outpatient clinic with a standardized, trauma-informed, and consent-based framework to discuss GWG with patients. It also allowed providers to reflect on anti-fat bias using peer-reviewed anti-fat bias assessment tools. The ATOP and BAOP tools were not administered as originally intended; however, they were a valuable tool in self-reflection of bias. The rate of compliance with the measure of asking patients for consent before being weighed was 58%, which did not meet the goal of 85%. The overall rate of compliance with using the dot phrase to guide and document conversations around GWG was 83%, which was very close to the 85% goal.

The results of completion of the ATOP and BAOP assessment tools did not meet the goal of 100% completion. However, some of the midwives that took the assessments noted they fulfilled the aim of bringing awareness to potential anti-fat bias. The results of the measure on consent to weigh patients did not meet the threshold of the specific aims. However, a key finding was the understanding that MA staffing difficulties may have significantly affected these results. This was seen in the gap analysis as a potential challenge, but this project confirmed workflow changes involving MAs may not be successful until there is continuity in MA staffing. Reminders to the MA fell to the midwives, which was a burden on an already busy clinic day. While the results of midwife compliance with dot phrase usage also did not meet the specific aims of the project, it was very close. A key finding that impacted this specific aim was the discovery that the participation of student midwives impacted dot phrase compliance overall. Future projects should take that into consideration in order to mitigate this variable.

A strength of the project was the positive feedback it received from midwives. Overall, the midwives expressed their appreciation for the focus on patient autonomy and bringing a more patient-centered aspect to the conversation around GWG. The trauma-informed, patient-focused format of the dot phrase allowed for the patient to identify and express their goals rather than simply receiving GWG recommendations. In addition, patients shared information about their histories with disordered eating and body dysmorphia, which they may not have shared without an open and non-judgmental space in which to do so. This feedback exemplifies the trauma-informed care aspect of the project rationale.

Interpretation

The 5 As framework has been shown to be an effective tool at guiding patient conversations around GWG during pregnancy (Washington Cole et al., 2017; Weeks et al., 2020). This project incorporated concepts and research from prior studies using the 5 As for weight counseling, both during pregnancy and in primary care. However, this project tracked usage and compliance of consent and the dot phrase created using the 5 As framework. Therefore, the results of this project were not directly comparable to other findings, such as those from Washington Cole et al. (2017) and Weeks et al. (2020), who focused on patient total weight gain during pregnancy when the 5 As were used in counseling. However, the midwives participating in this project reported that having the 5 As framework for discussion was a helpful tool for navigating GWG conversations in a patient-centered way, which was consistent with the findings of Weeks et al. (2020).

An incidental finding of this project was that all patients were ultimately willing to be weighed and discuss GWG. This was consistent with findings in multiple qualitative studies (Faucher & Mirabito, 2020; Lindsay et al., 2016; Nikolopoulos et al., 2017). However, several patients also noted their desire to focus on healthy behaviors and meeting their health goals. This is consistent with findings from the same qualitative studies which reiterated the desire of patients to have GWG discussed in a patient-centered way, taking into account their goals and individual needs (Faucher & Mirabito, 2020; Lindsay et al., 2016; Nikolopoulos et al., 2017).

The most significant challenge that may have influenced the results of this project was the lack of MA staff continuity within the clinic. Due to staffing shortages, MAs were often filling in from other clinics and were new to the midwifery clinic workflow, including ongoing quality improvement projects. This likely influenced the outcome of asking patients for consent before weighing them as a measure. While there were staffing challenges and additional work involved for the MAs and the midwives, there were no additional costs involved in this project.

Future related project recommendations might include an additional project to assess the sustainability of these interventions. This might include identifying methods to achieve similar outcomes without including the MA, unless MA continuity can be restored. Additional intervention variations that might be assessed in future projects may include asking for consent to weigh the patient throughout pregnancy at the initial prenatal visit, but incorporating the remainder of the discussion around GWG into the first return prenatal visit. This would allow the interventions to be split over two visits, and has the added benefit of addressing nutrition and movement at a time when many patients are experiencing less nausea and have more energy. Finally, researchers looking at using the 5 As during pregnancy noted that incorporating the 5As intervention at multiple points during pregnancy would likely be beneficial and should be studied further (Weeks et al., 2020). Incorporating the 5 As intervention into multiple prenatal visits throughout a portion of pregnancy would potentially be another useful area of improvement.

Limitations

This project took place in a mid-size midwifery practice associated with a large academic institution with midwives who had a high level of interest in the project. This project could be replicated in other midwifery or obstetric practices, with changes depending on the specific setting needs. Some of the factors that may have limited the results of this intervention were the duplication of the ATOP and the BAOP surveys with another sister location that shared the same midwives and the resulting decision to not administer the ATOP and BAOP after the final cycle. This resulted in a single

data point with no comparison ability. However, given that the primary goal of using the ATOP and BAOP was to provide a tool for midwives to self-reflect on their own biases around people in larger bodies, this was determined to be an acceptable outcome for this project.

Another limitation of this project was the involvement of students. While midwifery students are a valuable part of the clinic practice and were included in the education and communication around the project, the dot phrase was often not used in student notes. Additional steps that might be considered in future projects would be to consider incorporating the dot phrase into the NOB template to ensure the dot phrase was present in student notes. Additional signs in the midwifery office reminding students to use the dot phrase when discussing GWG with patients may also be helpful. Two of the midwives noted that it was challenging to stay on top of reminding students and MAs to implement the project. The inconsistency of MA staffing was also a limitation. This is atypical for this practice and is due to the current shortage of healthcare personnel, but may continue to be a factor for some time. Finally, there were multiple student DNP projects happening during this same time period, which added significantly to the workflow of the midwives and MAs.

Conclusions

The conversations about GWG, nutrition, and movement during pregnancy are a desired and necessary part of prenatal care but can be challenging for providers and patients. A quality improvement project at a mid-size midwifery practice associated with a large academic institution implemented a patient-centered and trauma-informed framework for asking patients for consent before weighing them during pregnancy and discussing GWG. This project fell slightly short of attaining the aims of an 85% compliance rate in both primary outcome measures; however, midwives in the practice found the interventions useful and they expressed plans to continue multiple aspects of the project moving forward into practice.

The sustainability of this project in its current form is questionable given that there were text reminders throughout the entirety of this project and there were multiple challenges with support staff

continuity. If these interventions were to continue, it is recommended that the process be modified to meet the needs and desires of the midwives to ensure sustainability. However, this project was beneficial for this practice to identify changes they would like to implement to ensure GWG is discussed in a patient-centered and trauma-informed manner.

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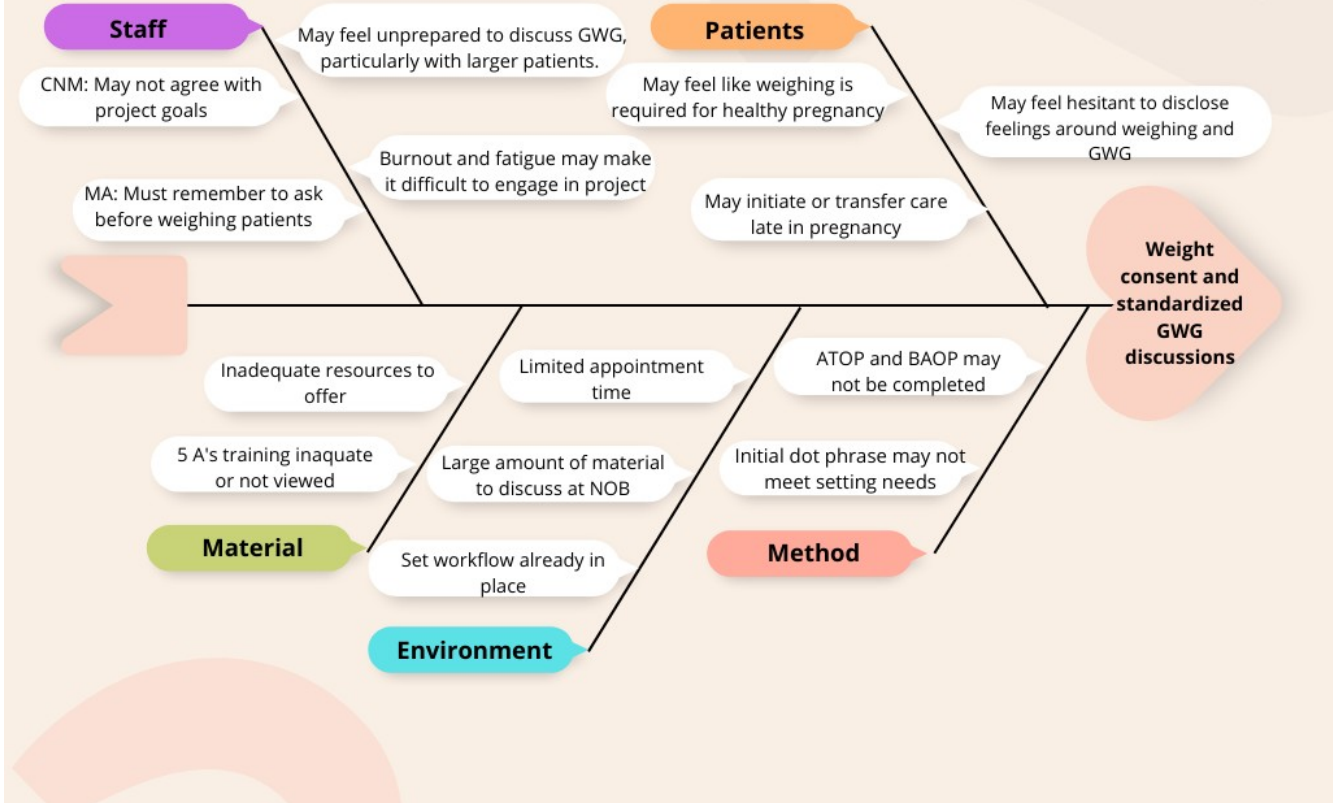
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Appendix A

Cause and Effect Diagram Analyzing Weight Consent and Standardized GWG Discussions Project



Appendix B

Initial Dot Phrase:

- Were you asked for consent before being weighed today, and would you like to be weighed throughout your pregnancy? (yes/no)
- Do we have your permission to discuss weight gain recommendations and nutrition and movement recommendations throughout your pregnancy (yes/no)
- If patient declines to be weighed: if your pregnancy becomes complicated by GDM, PET, or any other complication in pregnancy we may need to weigh you in order to monitor the health of you and your baby. Do you consent to being weighed in the case that these complications arise? You do not have to know your weight if it is taken. (yes/no)

(If patient consents to discussion):

- Patient's thoughts and feelings about their relationship with their body:
- Information on recommended weight gain was provided:
- The patient had the following goals for nutrition and exercise in pregnancy:
- The patient identified the following barriers to achieving these goals:
- Education and/or referrals were provided based on the identified barriers.

Appendix C

Final dot phrase:

- The patient was asked for consent before being weighed by the MA today.
- After discussion of pros/cons of episodic weighing at visits with the midwife, the patient consents to being weighed throughout the pregnancy.
- If yes, the patient would like to know their weight at each visit.
- If no, the patient was informed that if their pregnancy becomes complicated by GDM, preeclampsia, or another condition in which knowledge of their weight is recommended, this discussion will be revisited.

- Patient shared they would like the midwifery team to know *** about their relationship with food and their body.
- Information on recommended weight gain was provided:
- The patient had the following goals for nutrition and exercise in pregnancy:
- The patient identified the following barriers to achieving these goals:
- Education and/or referrals were provided based on the identified barriers.

Appendix D

ATOP: Attitudes Towards Obese Persons Scale

The ATOP is scored using a Likert-type response format (+3 = strongly agree; +2 = somewhat agree; +1 = agree; -1 = disagree; -2 = somewhat disagree; -3 = strongly disagree). Several items are reverse scored (i.e., are multiplied by -1): Item 2 through Item 6, Item 10 through Item 12, Item 14 through Item 16, Item 18 through Item 20. Responses are summed, and 60 is added to the previous total to obtain the ATOP score. Higher scores indicate more positive views of obese persons.

1. Obese people are as happy as nonobese people.
2. Most obese people feel that they are not as good as other people.
3. Most obese people are more self-conscious than other people.
4. Obese workers cannot be as successful as other workers.
5. Most obese people would not want to marry anyone who is obese.
6. Severely obese people are usually untidy.
7. Obese people are usually sociable.
8. Most obese people are not dissatisfied with themselves.
9. Obese people are just as self-confident as other people.
10. Most people feel uncomfortable when they associate with obese people.
11. Obese people are often less aggressive than nonobese people.
12. Most obese people have different personalities than nonobese people.
13. Very few obese people are ashamed of their weight.
14. Most obese people resent normal weight people.
15. Obese people are more emotional than other people.
16. Obese people should not expect to lead normal lives.

17. Obese people are just as healthy as nonobese people.
18. Obese people are just as sexually attractive as nonobese people.
19. Obese people tend to have family problems.
20. One of the worst things that could happen to a person would be for him to become obese.

Appendix E

BAOP: Beliefs About Obese Persons Scale

The BAOP is scored using a Likert-type response format (+3 = strongly agree; +2 = somewhat agree; +1 = agree; -1 = disagree; -2 = somewhat disagree; -3 = strongly disagree). Several items are reverse scored (i.e., are multiplied by -1): Item 1, Item 3 through Item 6, and Item 8. Responses are summed, and 24 is added to the previous total to obtain the BAOP score. Higher scores indicate a stronger belief that obesity is not under the obese person's control.

1. Obesity often occurs when eating is used as a form of compensation for lack of love or attention.
2. In many cases, obesity is the result of a biological disorder.
3. Obesity is caused by overeating.
4. Most obese people cause their problem by not getting enough exercise.
5. Most obese people eat more than non-obese people.
6. The majority of obese people have poor eating habits which lead to their obesity.
7. Obesity is rarely caused by a lack of willpower.
8. People can become addicted to food, just as others are addicted to drugs, and these people usually become obese.

Appendix F

Scoring of ATOP and BAOP

Scoring instructions for ATOP.

Step 1: Multiply the response to the following items by -1 (i.e., reverse the direction of scoring):

- Item 2 through Item 6, Item 10 through Item 12, Item 14 through Item 16, Item 19 and Item 20

Step 2: Add up the responses to all items.

Step 3: Add 60 to the value obtained in Step 2. This value is the ATOP score. Higher numbers indicate more positive attitudes.

Scoring instructions for BAOP.

Step 1: Multiply the response to the following items by -1 (i.e., reverse the direction of scoring):

- Item 1, Items 3 through Item 6, Item 8

Step 2: Sum the responses to all items.

Step 3: Add 24 to the value obtained in Step 2. This value is the BAOP score. Higher numbers indicate a stronger belief that obesity is *not* under the obese person's control.

From Allison, DB. *Handbook of Assessment Methods for Eating Behaviors and Weight-Related Problems. Measures, Theory, and Research*. Thousand Oaks, CA: Sage Publications.