Physician Perspectives on Inadequate Weight Gain During Pregnancy

Sponsored by
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Background

Colorado's high low-birth-weight rate has intrigued public health officials for years. Colorado ranks seventh highest in the nation for babies born at 5 pounds, 8 ounces or less. High-risk minority and low-income populations. characterize states with higher rates, such as Mississippi and Alabama. Most Coloradans however, enjoy a more privileged income and educational status than residents of these higher rate states. Colorado's high altitude certainly contributes to the low birth weight problem, but only secondarily. Because there are no options for reducing the state's altitude, it is more imperative that other factors contributing to low birth weight be identified and addressed.

In 1999, the Colorado Department of Public Health and Environment (CDPHE) studied the low birth weight rate in Colorado. Using three years of birth certificate data (1995 through 1997), they identified three major risk factors for low birth weight among singleton births in Colorado:

1. Inadequate weight gain during pregnancy;
2. Smoking during pregnancy;
3. Premature rupture of membranes.

Low birth weight related to multiple gestation births is another obvious risk factor. Only by reducing the *number* of multiple gestation births, however, can its associated low birth weight rate be reduced.

The study done by CDPHE identified inadequate weight gain during pregnancy as the largest contributor to Colorado's low birth weight problem among singleton births. If all pregnant women in Colorado gained an adequate amount of weight during pregnancy for their body type, Colorado's low birth weight rate for singleton births would be reduced by one full percentage point from 7.1 to 6.2 percent. The Health People 2000's low birth weight goal for both years 2000 and 2001 is 5.0 percent.

Inadequate weight gain during pregnancy is a potentially modifiable risk factor. In an effort to better understand how to ameliorate this risk factor among Colorado's pregnant women, individuals within the Women's Health Section of CDPHE decided to talk to physicians who provide prenatal care. They wanted to understand current physician practices in managing inadequate weight gain during pregnancy. They also wanted to identify types of assistance or support that physicians might find beneficial in addressing this issue with their pregnant clients.

Women's Health Section team members felt a focus group study would be the most appropriate method by which to elicit feedback from physicians. In Spring 2000, they hired Eliot & Associates to conduct the study. This report summarizes the findings.

Methodology

Participant Characteristics

A total of twenty physicians participated in focus groups or individual interviews designed to collect information on inadequate weight gain during pregnancy. Included were nine gynecologists and eleven family practitioners that provide prenatal care.

All practice in the Denver Metro area. Forty percent of physician participants have been practicing for more than 10 years, 15 percent between 5 and 10 years, and 45 percent less than 5 years. Slightly over half (55%) perform 6 or more deliveries per month, and over half of them (57%) perform more than 10 deliveries per month. Approximately equal numbers of physicians serve public (55%) and private (45%) sector patients.

Participants ranged in age from under 30 to over sixty. Forty percent were between 30 and 40 years of age and 45 percent between 41 and 60. Male physicians predominated almost 2 to 1: 65 percent male, 35 percent female.

Experience among physician participants ranged from those who were still in residency to one physician of retirement age who has dedicated a good part of his career to studying low birth weight in Colorado. Also represented in the group were four active members of the Colorado Chapter of the American College of Obstetrics and Gynecology (ACOG), one a high-ranking official. Two faculty members from the University of Colorado Health Sciences Center Family Medicine Department also participated.

Physician Recruitment

Initially, physicians were recruited by phone invitation using a random selection process. Lack of success with this strategy, however, led to other volunteer recruitment strategies, specifically mass mailings and broadcast faxes followed up with phone calls. Invitation flyers were also distributed at a local ACOG chapter meeting.

Volunteer recruitment strategies were only moderately successful. Ultimately, a snowball approach proved the most effective in enrolling several physician participants through recommendations made by their colleagues.

An attempt was made to enroll a mix of obstetricians and family practitioners proportionate to that in the Denver Metro area (60% OB/GYN to 40 % FP). Family practitioners were more willing to participate, however, so their numbers had to be limited to allow for a more proportionate mix.

Data Collection

A total of 20 physicians participated in the study. Thirteen physicians participated in three focus groups; the other seven were interviewed personally by phone.

Focus groups were conveniently located at three local hospitals (Rose Medical Center, The Medical Center of Aurora, Saint Joseph's Hospital) during early morning breakfast times or over the lunch hour. Each physician who participated in a group or phone interview received a $100 honorarium. Those who participated in focus groups were also treated to a meal.

Focus Group Questions

In collaboration with members of the CDPHE Women's Health section, ten study questions were designed (see end of report for questions). Both focus group participants and interviewees answered the same set of questions.

Specific questions were designed to elicit physician thoughts and practices

with regard to the following five content areas:

- What relationship do physicians believe exists between birth weight and prenatal weight gain?
- What typifies patients who have inadequate weight gain?
- How do physicians determine and monitor prenatal weight gain?
- What strategies do physicians use to intervene with inadequate weight gain?
- What support do physicians need in addressing inadequate weight gain during pregnancy?

Physician participants were thoughtful and respectful in their remarks. They seemed comfortable sharing their thoughts and personal experiences even when their comments may have been unpopular with other participants. All were guaranteed anonymity. The findings that follow snthesize the thoughts and comments they shared.

Findings

The findings presented here blend together the responses from both focus group members and interviewees. Major themes are derived from areas of convergence among all participants. Actual participant quotations are used throughout the report to support convergent themes.

What Relationship Do Physicians Believe Exists Between Birth Weight & Prenatal Weight Gain?

Although several physicians in the study acknowledged a correlation between inadequate weight gain during pregnancy and low birth weight, fewer believe a direct causal relationship exists. Many more believe that "there's a loose correlation," or say that they are "not convinced that poor weight gain [during pregnancy] is related to low birth weight."

This predominant philosophy is supported by physicians' belief that a baby's nutritional needs in utero supercede those of the mother: "The baby takes what it needs; mom will sacrifice but [the] baby will be fine." Another said: "Everything the mom takes in goes to the fetus so often the baby turns out OK." "Babies get what they need regardless. Small babies come from reasons other than poor nutrition . . . we're taught this in medical school," said a third doctor.

Several physicians shared examples that support their beliefs. "I have two patients right now with low weight gain. I use the ultrasound to show the baby is doing fine." Another said: "One patient was small to start. [With] ultrasound I monitored the pregnancy . . . the baby turned out small but not too small." And another said: "One mom only gained 6 pounds. Although she's due to deliver in two weeks, the ultrasound and fundal height show the baby is doing well."

Physician participants all said they believe that when inadequate weight exists in a pregnancy it is only one of many co-factors related to low birth weight babies. Other co-factors include smoking, hypertension, drug use, low socioeconomic status, psychosocial problems or eating disorders. "When pregnant women do not gain adequately, it almost never is a simple or isolated problem," said one doctor. Another concurred: "In residency, I saw lots of

young moms. Because of their socioeconomic status and too many other things going on in their lives it was not a priority to nurture their baby. Typically, they were smokers, had poor social situations and had inadequate prenatal care." One doctor said inadequate weight gain is an indicator of a woman's overall poor self-care: "[A woman is] usually not taking care of herself in many other ways if she's not gaining weight."

Many doctors believe that, "smoking is the biggest cause of low birth weight babies." One doctor said: "Smokers tend to not gain much weight . . . they smoke instead of eat." Another made a similar correlation: "If [my patients are] not smokers, I don't see a lot of this problem."

Physicians also mentioned that when women who are already underweight or have an eating disorder become pregnant, they are more likely to have a low-birth-weight baby: "Chronic nutritional problems influence the relationship [between weight gain and birth weight]. It's more pronounced in underweight women." Another doctor said: "Bulimics and anorexics eat like poor people . . . they don't get enough protein. With severe anorexia the baby can be affected." One physician gave his guideline: "If mom doesn't gain at least 10 percent of body weight during pregnancy, the baby can be small."

What Typifies Patients Who Have Inadequate Weight Gain?

Most physician participants estimated that inadequate weight gain patients comprise about 5 to 10 percent of their practices. Those who treat low-income women, or have in the past, estimated rates among this patient group to be as high as 25 to 30 percent. They also acknowledged that they might not see some of those with low or inadequate weight gain because this type of patient often comes in late for care.

When asked what type of patient is most likely to have a problem gaining adequate weight during pregnancy, answers differed depending on whether the practice was private or public. Women with higher incomes had a different set of weight related problems than medically indigent women.

In private practice, women who struggled with adequate weight gain during their pregnancies were most likely to be those with eating disorders or with extreme or continuous hyper-emesis. Occasionally hyperthyroidism or hypertension was mentioned as causative factors. A few have drug or tobacco addictions.

Physicians sometimes categorized private patients with inadequate weight gain as having body image issues. Often this was something they felt was not as problematic or easily influenced. "Patients conscious of their figure and uncomfortable with weight gain [during pregnancy] are not the ones we worry about . . . they're really a small number," said one doctor. Another made a somewhat similar comment: "I see a little problem with women not wanting to gain weight, but usually it doesn't lead to low birth weight babies. They may try and stay at the lower end of the recommended weight gain. Education doesn't help this type of patient."

Mostly limited to the private sector, low birth weight babies can result from

multiple gestation births. "Highly successful doctors are assisting with reproduction by implanting four to five eggs at a time . . . this leads to low birth weight because of multiple births."

In practices where physicians see medically indigent women, the typical low weight gainer is the woman with a socially disrupted lifestyle: "Tremendous social problems often precede poor weight gain . . . for example, the 17-year-old who is thrown out of the house with no reasonable source of income and a boyfriend who beats her up." Other socially disrupted lifestyles include abusive homes, the incarcerated, unmarried teen moms, the homeless, immigrants and those with psychosocial problems or unwanted pregnancies.

Although private practice physicians felt that some low-income women may have inadequate weight gain due to poor access to food, public sector physicians refuted what they believed to be a myth in the private sector. One doctor said: "There is no problem with lack of food for the indigent or homeless." Another claimed: "Some illegal immigrants have more social support and bigger family support systems and do OK even without access to WIC." Another doctor tried to clarify some of the confusion: "They need to know how to eat not where to get the food."

Women of all socioeconomic strata who are smokers inevitably have low birth weight babies. The struggle with depression also impacts women rich and poor: "Depression during pregnancy leads to lack of appetite. It's hard to treat due to the effect of medications on the baby."

How Do Physicians Determine and Monitor Prenatal Weight Gain?

Although most of the participating physicians did not refer directly to an IOM guideline chart to determine ideal prenatal weight gain, all claimed to follow some loose or informal interpretation of the guidelines. When asked for specific weight parameters, most quoted a range within or around 25 to 35 pounds. "I go by the ACOG guidelines but I keep it general . . . I don't want [the woman] to go over 30 pounds," said one doctor. Another explained: "I don't use charts because patients don't follow them anyway." One doctor said it's hard to follow ever-changing guidelines: "The guidelines keep changing and come from various places." Another simply stated: "I don't get precise."

Physicians said they use pre-pregnancy weight to determine the recommended weight gain for their pregnant patients: "I start off with what their weight is to begin with . . . if obese, I don't encourage much weight gain." If underweight or petite, most physicians recommend a gain of 30 to 35 or 40 pounds. In larger or obese women the suggested weight gain is 10 to 15 pounds. For average pre-pregnancy weight patients, 20 to 25 or 35 pounds is recommended.

Most physicians talked about using a "gestalt" or intuition to determine ideal weight gain. For example, "The person who wears Birkenstocks and is carrying books, you don't have to worry about." Another doctor said: "You just get a good feel for weight over time. I want them to gain enough but not too much."

Some physicians also consider rate of weight to be important but each seems to follow slightly different guidelines:

- "Two and a half pounds every four weeks is ideal."
- "It's best to gain five pounds in the first trimester and one pound every week in the second and third trimesters."
- "[I expect] they will gain very little in the first trimester, a half pound per week in the second trimester and one pound per week in the third trimester."
- "First trimester weight gain is not critical . . . the fetus is so small at this point."
- "The mom should start to gain by sixteen weeks."

Some physicians don't worry about looking at guidelines until they suspect inadequate weight gain: "I don't use the chart until I get worried about a patient's weight gain," said one doctor. "Then it can be a concrete tool to use with a patient to show expectation for weight gain." Another remarked: "Sometimes, all of a sudden, you get a growth spurt."

It's standard practice for a woman to weigh in at each prenatal visit. Generally, a nurse records the weight in the patient's chart. Various types of charts and flow sheet systems are used to document each weight. One doctor claimed: "It's easy to see the weight gain on our prenatal form with monthly columns next to each other." Another said: "We have a nice chart we use if we want to find an exact number [for expected weight gain]." A different doctor likes to use a flow sheet: "We use an OB flow sheet that the doctor writes on every time. Every time they come in I add up the total weight gain and look at the monthly weight gain." For others, "the nurse calculates the weight gain each time."

Most doctors talk to their patients at each visit about their recorded weight: "I talk to the patient about how their weight is going and how much more they need to gain. I give them feedback." Another said: "I ask the patient how much they weighed or the patient will bring it up. I try to identify with the patient and have a conversation."

But some physicians choose not to address their patients' weight directly. "By virtue of weighing them you're doing all the counseling you need to do," said one doctor. Some don't mention it unless it becomes a problem: "I talk to the patient when their low weight gain verges on being a medical problem. I don't go any further if the baby is doing OK."

Although many physicians talk to their patients about weight at each prenatal visit, several said they feel ill prepared to counsel them if weight gain is not progressing appropritely. They cite lack of adequate training as the primary reason: "It's our responsibility to educate these women about nutrition but we don't necessarily have great training." One doctor said: "Our education in nutrition is lacking as doctors. The University is trying to improve it. It's hard to talk to patients about it." Another doctor cited a different issue: "The information the patient gives us does not necessarily correlate with what they say they're gaining. I don't understand."

What Strategies Do Physicians Use To Intervene With Inadequate Weight Gain?

When a woman is not gaining adequately, physicians start wondering about the baby's growth and order an ultrasound around the 18 to 20 week mark: "I do serial ultrasounds and check fetal height." Some check earlier: "I intervene with an ultrasound if [the mother's] weight gain is low after the first trimester."

If the ultrasound demonstrates the baby is progressing normally then the physician cares less about the mother's weight gain: "I'm not so concerned about mom's body mass if the baby is doing OK." Other doctors concurred: "If the baby is growing there's not a problem," and "if head size is small in the first trimester I would intervene; otherwise I'm not concerned about inadequate weight gain in the first trimester." Another doctor claimed: "Weight alone is an inaccurate measure."

When asked to describe how they intervene with patients who do not gain adequately through pregnancy, physicians named several strategies. Before addressing nutritional issues, they attempt to determine if poor nutrition is a symptom or cause. Poor eating habits, they said, may be a symptom of another underlying cause of thyroid dysfunction, anorexia, drug abuse, smoking and nausea. "Determining what causes it is important. We need to see what's going on," said one doctor. "It's almost always smoking, so we counsel around that issue," said another. One physician said he intervened immediately when the cause is nausea because he "doesn't want the patient to be incapacitated."

Sometimes underlying causes are of a social or psychosocial nature rather than a medical one. Public sector physicians mentioned making a social work referral if the patient was in an abusive situation or having trouble getting food: "I get the social worker involved if the patient is living out on the streets and not getting adequate calories . . . then the problem is a multi-factorial one."

Private sector physicians, however, were unaware of where or how to access the services of a social worker so usually did not. One private sector physician discovered a home visitation program for pregnant women called "Matria." He described the program and was anxious to share this information with other physicians: "They do education and assessment and nutrition education. Insurance pays for it."

Private sector physicians are able to make a mental health referral for a woman with a possible depression or psychosis underlying the inadequate weight gain. Physicians who serve medically indigent women, however, said they have fewer mental health referral sources for their pregnant patients.

After all potential medical conditions and underlying psychosocial causes for inadequate weight gain are explored, physicians attempt to address nutritional issues directly. They may counsel the patient on their own or refer her for nutritional counseling. Sometimes a nutritionist/dietician or nutritionally trained nurse is available within the

practice but more often this is not the case, especially in private practice.

When physicians do counsel patients they said the intervention is usually minimal: "I do a brief history if I'm concerned and make a few suggestions." One doctor said: "My nutrition counseling skills are OK to counsel patients although I'm not an expert on nutrition." Another explained: "My questioning may not be sensitive enough to pick up all nutritional problems."

Some physicians find it difficult to counsel their patients about nutrition: "Patients don't want to talk to me about it." Another described a potential issue when husbands attend the visit: "If the spouse is there I don't want to talk to them about weight gain because of possible embarrassment in front of their husband."

Some counsel only when the baby is in danger: "If the baby is growing (according to ultrasound) then I wouldn't talk to them about nutrition."

Inadequate time to counsel patients poses another barrier in both private and public practices: " Finding the time to work with patients is the greatest challenge when the patient population (public sector) is large." Another doctor said: "It's hard enough to get pregnancy covered, let alone nutrition. It's tough to have enough time during a 10 to 15 minute appointment (private practice) to offer nutrition. We do it to cover ourselves, that is, document talking to them."

Physicians who have nutrition resources available make referrals. They may refer to a nurse, nurse practitioner or midwife within their practice. A few have limited access to a nutritionist: "We have one nutritionist one day a week for a half day. Nurses get to do most of the counseling." Another said: "If I have access, I use a dietician." Public sector doctors use WIC: "We can use WIC for help. WIC gives them some advice if they are eating wrong or don't have an appetite."

Some physicians do not make nutrition referrals: "I should refer low weight gain [women] to a nutritionist but I don't." One physician does not see the benefit: "I rarely refer to a nutritionist . . . if they have food they'll eat it."

When asked to talk about the success of nutritional interventions, physicians cited various examples: "Some patients are motivated to correct the problem on their own so we have the most success with these patients." Another doctor claimed: "Ninety-five percent of patients do extremely well if they come in early." Still another said: "I've had good success once they see a nutritionist."

Others were less convinced of the benefit of nutritional intervention. "Some cases are successful, some not," said one doctor. "Nutritional counseling did not help with two patients but the baby size was OK," said another. And sometimes attribution is difficult: "It's hard to measure the success of nutritional counseling . . . I don't know if it was my intervention or it just resolved on its own."

When nutritional intervention is unsuccessful, physicians often attribute it to patient non-compliance and low

motivation: "One woman didn't go to a dietician as directed," or "there's apathy in clinic (low income) patients," or "most [low income] patients don't have the follow through to go to a dietician even if we set it (referral) up for them." Private practice patients are different they claim: "In private practice patients keep appointments unlike in clinic situation. Private practice is different than clinic practice. There's much more extra support in the private practice world."

Physicians listed the types of patients most reticent to follow their nutritional suggestions: teens, drug and alcohol users, patient with psychosocial issues, single moms, smokers, anorexics, bulimics, and the homeless. They also spoke of those who are enmeshed in cultural beliefs: "Patients whose grandmother is giving advice are hard to deal with. They follow cultural guidelines rather than medical ones for nutrition . . . cultures have a strong pull."

"Patients with social issues are not inclined to worry about weight gain," said one doctor. "[But] the single woman with two jobs trying to do the right thing but forgetting to eat right sometimes neglects her nutrition . . . but she's trying to do the right thing."

Previous history also has an impact: "When patients have a history of previous successful low birth weight babies with low weight gain during pregnancy they don't want input from medical providers."

What Support Do Physicians Need In Addressing Inadequate Weight Gain During Pregnancy?

Physicians were eager to share various direct and indirect strategies that would help support them in addressing inadequate weight gain during pregnancy. They emphasized the need to develop a multi-factorial approach for what was usually a multi-factorial problem. They reiterated: "You can't look at nutrition in isolation. It's not a simple problem. The mind is more difficult to heal than the body."

They believe that the emphasis of any intervention program designed to address inadequate weight gain during pregnancy should focus on low-income women: "Well-to-do patients do not need any more assistance or support. We could do the most for doctors who work with low-income women. Most women in our society are not nutritionally deprived."

Approaches that would directly support physicians are listed below followed by explanatory narrative. A list of strategies less directly related to an individual physician's practice is also provided with explanatory narrative. Overall, physicians realize they need support from other professionals and agencies to begin to ameliorate the problem. They acknowledge: "Doctors can't do it all themselves."

Suggestions for Direct Physician Support:

1. Nutritional education for physicians
2. Increased availability of nutritionists to physicians
3. Organized nutritional counseling centers for patients

4. Information on available nutrition and social work resources made accessible to physicians
5. Monthly case conferences regarding nutritionally deficient patients
6. Educational pamphlets tailored to specific patient needs
7. Home visitation for nutritional assessment and counseling

Physicians universally spoke about their inadequate nutritional counseling skills: "Our colleagues talk about not having adequate training in nutrition. We're lucky if we get a one-hour, two-week course on nutrition in medical school. None of us doctors are trained." One doctor remarked: "We overestimate what doctors learn in medical school."

Physicians specifically outlined how nutritional education can best be provided: "If it comes to me I might go, like a grand rounds. I would not go to a week-long conference." Another said: "I would go to a pregnancy related nutritional offering." One doctor was blunt: "Tie it in with something more flashy if you want to teach doctors about nutrition."

Physicians recognize the advantage of tapping into the expertise of other professionals for counseling their patients about nutrition: "Getting training is fine to help me identify poor weight gain but I want to refer out for follow-up so the patient can work with the nutritionist more intensely." Another doctor said: "I may think the diet is fine but I'm not trained in the field so I may not know enough to help."

Several physicians in the study emphasized the current unavailability of nutritionists for counseling their patients: "We should have a nutritionist available in our department or some central location for this type of patient." Another suggested: "Make the nutritionist part of the OB check-up once a month."

Additionally, doctors see the benefit of organized nutritional counseling centers for their patients: "We need a central place already set up to do nutritional support." Another suggested: "It would help to have a weight clinic (outside of the office) with trained nurses to take histories and provide nutrition counseling."

Several doctors said they did not know about outside resources for their patients: "I need more knowledge about WIC and other social services. Doctors don't know. For instance, the ART program is a good free drug abuse program for pregnant women. All doctors may not know about it. Doctors need to know where to find resources and support for women."

One physician thought it might be helpful to have monthly case conferences regarding patient weight gain: "Right now we meet at St. Joe's once a month to discuss patients at risk and determine how to pursue treatment. We could use a similar model for our low weight patients and get a social worker involved."

Some physicians, particularly those who see low income patients, requested nutritional pamphlets: "I'm not as familiar with the aspects of different ethnic diets (Africa, India, Mexico). Information about typical meals would be useful." Another said: "We need

more materials about special dietary needs like diabetes."

Some physicians suggested a home visitation service for nutritional assessment and counseling: "Have someone go out to the home and see what's going on. Some home visitor programs are part of the package for low income women. We should use the same model for all women. It would lessen the threat on the doctor-patient relationship if the doctor didn't have to recommend it." A public sector physician recommended the use of 'Dula's' (lay birth coaches) for educational nutrition counseling.

Indirect Physician Support Requested:

1. More cooperation from insurance companies
2. More Medicaid access
3. Pre-pregnancy patient education
4. Social marketing campaigns
5. Enhance WIC services

According to doctors, insurance companies sometimes serve as barriers to access for patients with nutritional needs: "Insurance might not cover nutritional counseling. [If they do] it's just another headache. I've never been helped by any insurance company. They make the problem mine not theirs." Another doctor suggested: "We should get insurance companies to, not only pay for identification of nutritionally at-risk patients, but also for [nutritional] home visits."

Increased Medicaid access was suggested by more than one doctor in the study as a way to increase nutritional services for low-income pregnant women: "Medicaid does not pay for nutritional visits. There are a lot of women in our practice who need it." Another doctor suggested: "We should change the criteria for Medicaid so that when a women becomes identified as 'inadequate weight gain' she automatically becomes eligible for Medicaid."

Many physicians wish that patients were better educated before they showed up in their office: "There should be more sex education in the schools to avoid unwanted pregnancy." One physician suggested that Planned Parenthood get clients thinking about good nutrition in preparation for parenthood: "They could give them folic acid and talk about avoiding toxic exposures and eating right before they get pregnant."

Several physicians proposed social marketing strategies for low-income women: "Place posters and reminders in poorer areas and on buses. Some low income women don't understand the correlation between good nutrition and a healthy baby."

Lastly, one physician recommended expanding WIC clinic responsibilities to include nutrition education: "A WIC center person could follow up on nutrition since many patients qualify and WIC is already set up to do it. They could have group classes that are not mandatory and do some education."

Summary

Medical school does not prepare physicians to counsel their patients about nutrition. Nor does it prepare them to address the multiple intractable social problems or addictive behaviors that

plague some of their patients. Most have excellent medical training but it is focused on curative rather than preventive measures.

Consequently many physicians have "medicalized" the problem of inadequate weight gain during pregnancy. Instead of promoting good nutrition from the onset of pregnancy, most wait until a problem occurs to intervene. They perform ultrasounds and other measurements that estimate a baby's weight and only intervene when a baby's size becomes unacceptably small. Many times, their goals for patient weight gain remain at the low end of acceptable.

Because inadequate weight gain during pregnancy does not usually result in low birth weight babies, it gets less attention than competing pregnancy issues that doctors have been better trained to address and for which they have medical interventions. Add to that, the fact that many doctors refute the correlation between maternal weight gain and birth weight because they have delivered many adequate weight babies when the mother's weight gain during pregnancy was inadequate.

Consequently, preventive measures take a back seat to curative ones, especially in busy and full practices and particularly in areas where training has been less than optimal, such as nutrition. Physicians wish they were better equipped in medical school to address inadequate weight gain with their patients are also willing to refer their patients to others who can help in ameliorating this problem. Doctors say they want enough training to be able to adequately detect nutritional deficiencies and refer them on and also want readily accessible nutritional counseling for patients throughout pregnancy. Some suspect there might resources already available they might not know about.

Study Strengths and Limitations

Strengths

Despite its limitations, this study boasts numerous strengths. To start, it has high face validity. Most of the comments are believable and not unexpected. Also, a considerable amount of convergence within and throughout the groups and interviews lends validity to the major themes that emerged. Considering the breadth of experience (resident physicians to senior faculty) and diversity of backgrounds represented among respondents, the similarity of responses portrays a fairly homogeneous thinking and acting group. Both public and private practice physicians, obstetricians and family practitioners regularly reinforced each other's responses.

Most notably, the physicians who participated in this study exhibited considerable candor, honesty and sincerity in the thoughtful responses they provided. This information can be used to inform the design of responsive strategies for intervening with women who are at risk of delivering low birth weight babies due to inadequate weight gain during pregnancy.

Limitations

Although minor in nature, some shortcomings in study design resulted from the difficulty in recruiting obstetricians for the focus groups - three

short of the target number originally conceptualized for the study. Some of the contributing factors include:

- Some obstetricians told us that inadequate weight gain during pregnancy is not a “glitzy” enough topic for a focus group discussion. They much prefer the focus groups conducted by “drug reps” and medical supply companies that focus on new medications and technologies.
- Physicians, in general, said they are constantly bombarded by requests from research firms and drug companies to participant in focus groups and surveys. This study represented one more annoying solicitation. Drug companies compensate physicians at the rate of $65 per 15 minutes so we suspect the $100 honorarium offered to participants was not enticing to some.
- The ratio of obstetricians to family practitioners in the study - 1:1.2 - did not adequately mimic the distribution in actual practice - 1:0.7 - because obstetricians were much more difficult to recruit than family practitioners. Family practitioners, however, are more likely to work with low-income populations where the prevalence of inadequate pregnancy weight gain is highest.
- More obstetricians than family practitioners were interviewed by phone. It would have been ideal if all twenty physicians could have participated in one of the three focus groups. Though focus groups engender a rich in-depth discussion stimulated by the comments of its constituents, individual interviews allow for open remarks and spontaneity as well as an opportunity to probe for understanding and confirm responses.

Physician Focus Group/Interview Questions: Inadequate Weight Gain During Pregnancy

1. Talk about the relationship you believe exists between inadequate weight gain during pregnancy and low birth weight babies.

2. What percentage of your prenatal patients would you estimate have difficulty achieving/maintaining ideal weight gain during pregnancy?

3. In your opinion, what type of patient is more likely to have a problem with adequate weight gain during pregnancy?

4. How do you determine the individual recommended weight gain for women in your practice?

5. How is weight gain monitored throughout a woman's pregnancy? (e.g. first intervention, how often, etc.)

6. What strategies do you use to intervene with a woman who is not gaining adequately?

7. What success have you had with the interventions you've tried?

8. In your experience, what type of patients present the greatest challenge with following your recommendations for adequate weight gain?

9. Is there any type of assistance or support that physicians need in addressing inadequate weight gain with their prenatal patients? (e.g. written materials, tickler, available dietician, education, IOM guideline update, insurance coverage, etc.)

10. Is there anything we've missed that you would like to talk about with regard to inadequate weight gain during pregnancy?