

# OB/GYN Clinical [ALERT]

Evidence-based commentaries  
on women's reproductive health

## ABSTRACT & COMMENTARY

# Opioid Prescriptions After Cesarean Delivery: How Much Should We Prescribe?

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Dr. Allen reports she is a Nexplanon trainer for Merck, and has served as a consultant for Bayer and Pharnanest.

**SYNOPSIS:** This cross-sectional survey of 720 women found that 85% filled an opioid prescription after cesarean delivery, and the median number of tablets dispensed was 40. The median number of tablets consumed was only 20 tablets and the number dispensed did not correlate with patient satisfaction, pain control, or the need for a refill.

**SOURCE:** Bateman BT, Cole NM, Maeda A, et al. Patterns of opioid prescription and use after cesarean delivery. *Obstet Gynecol* 2017; June 6. doi: 10.1097/AOG.0000000000002093. [Epub ahead of print].

This was a cross-sectional survey performed from September 2014 to March 2016 at six academic medical centers in the United States including Massachusetts General Hospital, Brigham and Women's Hospital, the University of Michigan, Columbia University, Wake Forest Health Science Center, and Stanford University. Participants were a convenience sample of English-speaking adult women who had undergone elective or unplanned cesarean delivery and did not stay in the hospital longer than seven days after delivery. Women enrolled in the study were contacted two weeks after hospital discharge and completed an interview about their pain experience, use of opioids and other analgesics,

medication side effects, and satisfaction with pain management. The type and number of opioids prescribed was obtained by asking women to read the medication bottle label. If this was not available, the information was abstracted from the medical record. Data on patient demographics and hospitalization also were obtained from the medical record. The number of leftover tablets, if any, was obtained by asking the women to count the number of pills left in the bottle. If the bottle was not available, subjects were asked to estimate the number. If subjects did not feel comfortable estimating, the data were considered missing. Investigators asked participants to rate their pain on discharge, during the first week postpartum, and during

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the second week postpartum, as well as their satisfaction with pain control.

A total of 1,065 women were approached for study participation: 55 did not consent, 35 did not meet inclusion criteria, three were excluded for other reasons, and 252 were not able to be reached by phone two weeks after delivery, resulting in a final sample size of 720 women. The mean age of participants was 32.7 years old, 60% were white, and 77% were privately insured. Three-quarters of the sample was recruited from the Boston and New York sites. Nearly all prescriptions were for 5 mg oxycodone (82.1%) or 5 mg hydrocodone (8.7%). The median maximum pain score upon discharge from the hospital was 5 (interquartile range [IQR] 3-6); the median score was 4 (IQR 2-5) during the first week; and the median score was 2 (IQR 1-3) during the second week. Of the 720 participants, 615 (85.4%) filled an opioid prescription. The median number of tablets dispensed was 40 (IQR 30-40), the median number consumed was 20 (IQR 8-30), and the median number left over was 15 (IQR 3-26). The vast majority (95%) had not disposed of the leftover tablets at the time of the interview. The sample was divided into tertiles based on number of tablets dispensed: ≤ 30, 31 to 40, and > 40. There was no difference across the groups in terms of satisfaction with pain relief, pain scores during the first two weeks post-discharge, and the proportion requiring a refill (5%). There was a correlation between the number of tablets dispensed and the number of tablets consumed.

#### ■ COMMENTARY

It is well known that prescription opioid abuse is a major problem in the United States. Prescription opioid abuse often leads to subsequent heroin abuse, and we are in the midst of an epidemic of opioid overdose deaths.<sup>1</sup> Leftover prescribed medication has been identified as an important source of diverted or misused opioids and accidental ingestion. Studies show that most patients fail to dispose of leftover opioids and some share leftovers with other people.<sup>2</sup> The authors of this study aimed to determine the normative amounts of opioid prescriptions after cesarean delivery in the United States. This is important because cesarean delivery is the most common inpatient surgical procedure performed nationally, with 1.3 million surgeries performed annually.<sup>3</sup>

The strengths of this study included the attempt to survey women in different areas of the country. Nevertheless, only seven subjects were

recruited from Stanford, 52 from the University of Michigan, and 94 from Wake Forest University, with the vast majority from Boston and New York. Therefore, the data likely only represent academic medical center practice in northeastern states. Other limitations include the fact that one-quarter of those approached were not able to be contacted for the survey, and these women may be different in important ways. In addition, I am not sure why the authors included women who were in the hospital postoperatively for more than four days, which is the typical number for cesarean delivery. Nevertheless, this is one of the first attempts to quantify opioid prescribing patterns after cesarean delivery. It seems that most patients are prescribed 40 tablets of Percocet or Vicodin (I assume the opioids were combined with acetaminophen but the authors did not state this explicitly) and only use 20 tablets. The authors also found that 15% of women did not fill their opioid prescriptions, citing reasons such as not needing or wanting opioids (87%), not liking the way opioids made them feel (11%), and negative side effects during prior exposure to opioids (9%). The authors did not find that the number prescribed affected patients' satisfaction with pain control. Therefore, it seems reasonable that the number of tablets prescribed could be fewer initially and also could be individualized to patients based on their preferences.

Over-prescription of opioid analgesics is a problem because it potentially allows unused medication to be diverted. Several states have passed laws targeting initial prescriptions of opioids for acute pain. For example, in my state, Rhode Island, providers are required to check the Prescription Drug Monitoring Program website prior to prescribing opioids to patients. After this, providers are allowed to prescribe no more than 30 morphine milligram equivalents total daily dose per day for a maximum total of 20 doses. This translates to 20 tablets of Percocet for the initial opioid prescription.

Initially, when this law passed, I was concerned that our patients would be calling for Percocet refills after cesarean delivery. Since we cannot send opioid prescriptions electronically in our electronic medical record system, this would mean that patients physically would have to come to the clinic to pick up a new prescription. I felt that this would be a burden to our patients who recently went home with a newborn and depended on public transportation. Nevertheless, we have not found a marked increase in calls for Percocet refills.

### Table 1: How to Dispose of Medicine Safely

If you are finished with a prescription medicine and you have pills left, or if you have any **unused** prescriptions around the house, **it is important to get rid of them safely.**

The best thing to do is to bring them to a drug disposal box or take-back event.

A list of sites for safe drug disposal can be found at <http://noperi.org/drugdisposal.html> or call your local police department for information on take-back events.

If you cannot get to a drug disposal site, here are the steps to safely dispose of any medicine:

1. Take medicine out of its original container and mix it with cat litter or used coffee grounds.
2. Put medicine into a disposable container with a lid or into a sealable plastic bag.
3. Conceal or remove any personal information (including prescription number) on the empty containers.
4. Put the sealed container or bag and the empty medicine bottles in the regular trash.

**Please remember, it is your responsibility to safeguard all medicines and keep them in a secure location.**

Source: Women and Infants' Hospital, Providence, RI.

Another recommendation instituted by our hospital was providing information on how to dispose of medications safely in the discharge instructions given to patients. (See Table 1.) These are specific to Rhode Island, but the Food and Drug Administration has recommendations on its website for safe drug disposal.<sup>4</sup> Although I would not expect a woman only two weeks postpartum to have disposed of her leftover opioid medications given the demands of caring for a newborn, that is something that could be addressed at the postpartum visit. Just reminding our patients of the importance of safely disposing any leftover opioid medications would have a great effect. ■

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#### ABSTRACT & COMMENTARY

## AUGS Consensus Statement: Anticholinergic Medication Use and Cognition in Women With Overactive Bladder

By Chiara Ghetti, MD

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Dr. Ghetti reports no financial relationships relevant to this field of study.

**SYNOPSIS:** Available evidence has shown significant associations between anticholinergic medication use and increased risk of cognitive impairment. Behavioral therapies for overactive bladder should be first-line treatment. If these treatments fail and pharmacologic treatment is considered, providers should counsel patients on associated risks, prescribe the lowest effective dose, and consider alternative treatments in patients at risk.

**SOURCE:** This document was developed by the American Urogynecologic Society (AUGS) Guidelines Committee with the assistance of Tonya N. Thomas, MD, and Mark D. Walters, MD. AUGS Consensus Statement: Association of Anticholinergic Medication Use and Cognition in Women With Overactive Bladder. *Female Pelvic Med Reconstr Surg* 2017;23:177–178.

The purpose of this consensus statement was to highlight recent evidence regarding anticholinergic medications and their association with cognitive impairment, dementia,

and Alzheimer's disease. Anticholinergic medications are the mainstay of pharmacologic treatment of overactive bladder (OAB). OAB affects a large proportion of women and has

a significant effect on quality of life. In light of evidence of strong associations between anticholinergic medications and cognitive impairments, if providers consider pharmacologic treatment of OAB/detrusor overactivity (DO), they should counsel patients about the associated risks, prescribe the lowest effective dose, and consider alternative therapies in patients at increased risk.

## ■ COMMENTARY

Recent analyses estimate that 27 to 36 million people live with Alzheimer's disease or dementia worldwide. Alzheimer's disease is the most common form of dementia. Dementia is very uncommon at younger ages, but its prevalence doubles with every five years of age after age 65 years. In a report by the Organization for Economic Cooperation and Development, dementia was found to affect < 3% of people aged 65 to 69 years, but almost 30% of those aged 85 to 89 years.<sup>1</sup> As the world's population ages, there will be a growing number of people affected by dementia. Risk factors for dementia include age, genetics, alcohol use, atherosclerosis, diabetes, hypertension, smoking, and mental illness.<sup>2</sup>

The published consensus statement reviews several recent studies reporting strong associations between anticholinergic medications and cognitive impairment and dementia. Gray et al published a population-based prospective cohort study of 3,434 participants examining the association between cumulative anticholinergic use and the risk for dementia.<sup>3</sup> In this study, bladder antimuscarinics accounted for 10.5% of anticholinergic use. Subjects in the highest exposure category (corresponding to oxybutynin chloride 5 mg taken daily for more than three years) had a statistically significant increased risk for dementia or Alzheimer's disease compared to nonusers of anticholinergics. These subjects were one and a half times more at risk of having dementia or Alzheimer's disease. A second large cohort study found significant differences in cognitive performance between anticholinergic users and nonusers. Anticholinergic users also had significantly reduced brain glucose metabolism and significant brain atrophy on neuroimaging when compared to nonusers.<sup>4</sup>

Anticholinergic medications include some antidepressants, bladder antimuscarinics, antihistamines, and other medications. Antimuscarinic medications and beta-3 agonists are the mainstay of pharmacologic treatment for OAB. Urinary urgency and frequency and nocturia, with or without urgency incontinence, comprise a spectrum of symptoms included in the clinical diagnosis of overactive bladder (OAB). The diagnosis of OAB overlaps with DO, which is a urodynamic diagnosis defined as involuntary detrusor contraction during filling cystogram. OAB is thought to affect 12-17% of the general population, and OAB symptoms have a significant effect on quality of life.<sup>5</sup>

In the December 2015 issue of *OB/GYN Clinical Alert*, we reviewed findings that pelvic floor physical therapy improves urinary symptoms.<sup>6</sup> Behavioral therapies are the first-line therapies described in the American Urological Association

and Society for Urodynamics, Female Pelvic Medicine, and Urogenital Reconstruction Guidelines on OAB.<sup>7</sup> Behavioral therapies include the use of bladder training, pelvic floor muscle exercises (PME), biofeedback, lifestyle modification, and dietary changes, as well as approaches that combine bladder training with PME and/or biofeedback.<sup>8</sup>

The new guidelines recommend trials of pharmacologic treatment if behavioral therapies do not control symptoms. Antimuscarinics are an anticholinergic medication that blocks acetylcholine activity at muscarinic receptors. Because muscarinic receptors are ubiquitous through the body, antimuscarinic medications can cause systemic side effects including dry mouth, constipation, and blurred vision. Recent studies clearly indicate a strong relationship between anticholinergic use and cognitive impairment.

These studies and this consensus statement emphasize the gravity of prescribing anticholinergics for OAB/DO treatment. A large number of patients presenting and being treated for OAB/DO in our practices are older and may have multiple preexisting risk factors for dementia. When considering pharmacologic treatment of OAB/DO, we should assess each patient's risks for dementia and whether the patient is taking other types of anticholinergic medications. If prescribing antimuscarinics, it is best to use the lowest effective dose possible and consider use of beta-3 agonists. When prescribing antimuscarinics, we must educate our patients about the specific risks of cognitive impairment, dementia, and Alzheimer's disease while reviewing potential benefits of medication use and discussing alternative therapies, including intradetrusor onabotulinum toxin A<sup>9</sup> or neuromodulation. ■

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# Obesity: The New Epidemic

By Molly Brewer, DVM, MD, MS

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Dr. Brewer reports no financial relationships relevant to this field of study.

SYNOPSIS: Obesity has risen significantly worldwide and is associated with an increased risk of morbidity and mortality in women throughout their lives. Risks include infertility, gestational diabetes, type 2 diabetes, heart disease, and cancer.

We are inundated with information about the opioid epidemic. As such, there are increasing constraints on the prescribing of opioids as well as significant funding to address the shocking new death rate from opioid overdose. It has been estimated that of the 20.5 million Americans age 12 years or older who had substance use disorder in 2015, 2 million involved substance use disorders with prescription pain relievers and 591,000 with heroin. Approximately 23% of individuals who use heroin also develop opioid addiction. Drug overdose is the leading cause of accidental death in the United States, with 52,404 lethal drug overdoses in 2015. Opioid addiction is driving this epidemic, with 20,101 overdose deaths related to prescription pain relievers, nearly 50% more than heroin overdose. Between 1999 and 2010, 48,000 women died of prescription pain reliever overdoses.<sup>1,2,3</sup> Opioid addiction is a serious health problem particularly in the United States. The attention given to opioid addiction is far more widespread than the attention being given to obesity; however, obesity has a greater effect on morbidity and mortality.

Worldwide, the prevalence of obesity more than doubled between 1980 and 2014. In 2014, more than 1.9 billion adults aged 18 years and older were overweight (body mass index [BMI], 25-30 kg/m<sup>2</sup>). Of these, more than 600 million adults were obese (BMI > 30 kg/m<sup>2</sup>). About 13% of the world's adult population (11% of men and 15% of women) were obese in 2014, and 39% of adults ≥ 18 years of age (38% of men and 40% of women) were overweight.<sup>4</sup> Obesity accounts for 18% of deaths among Americans between 40 and 85 years of age, according to research from the *American Journal of Public Health*.<sup>5</sup> This translates to 472,755 deaths in 2014. Exposure to risk factors for obesity begins in childhood or adolescence, and now is being recognized as present in utero if the mother is obese. These children have an even higher risk of becoming overweight or obese because of their obese mothers. Consequently, these populations are experiencing all the health dilemmas, including type 2 diabetes and hypertension, associated with their obesity at younger ages.

Women appear to be more susceptible than men to dying from obesity. Black women have the highest probability of dying from obesity or being overweight (27%) followed by white women (21%).<sup>5</sup> Women who become obese at a young age have an increased risk of death. For every five

BMI points above 25 kg/m<sup>2</sup>, the increased relative risk of death is 52% for people 35 to 49 years of age (hazard ratio [HR], 1.52; 95% confidence interval [CI], 1.47-1.56), but 21% for people 70 to 89 years of age (HR, 1.21; 95% CI, 1.17-1.25). Deaths from heart disease, stroke, and respiratory disease also increased for people with a BMI > 25 kg/m<sup>2</sup>, and death from cancer was moderately increased with a hazard ratio that increased linearly with BMI. The number of excess deaths attributed to being overweight or obese varies by region, from 19% in North America to 5% in Eastern Asia.<sup>6</sup>

Obese women desiring pregnancy have an increased risk of diabetes, anovulation, development of endometrial pathology (endometrial hyperplasia or endometrial cancer), polycystic ovarian syndrome, and infertility. For women who are able to achieve pregnancy, the major risks from obesity are poor neonatal outcome, increased risk of gestational diabetes, increased risk of type 2 diabetes, higher rates of labor dysfunction, cesarean delivery, and intraoperative complications at the time of delivery. Women older than 40 years of age have an increased risk of diabetic complications, endometrial cancer, colon cancer, breast cancer, and death from heart disease. Obesity is affecting women at all ages and is often starting in childhood.

## ENDOMETRIAL CANCER

Obesity is responsible for up to 81% of the endometrial cancer diagnosed worldwide.<sup>7</sup> In 2012, 527,600 women were diagnosed with endometrial cancer.<sup>8</sup> The mortality rate was 1.7 to 2.4 per 100,000 women. In 2017, an estimated 61,380 cases of endometrial cancer will be diagnosed in the United States, and more than 10,920 deaths.<sup>9</sup> This is a 10% increase in both incidence and mortality in just five years. Historically, the age of onset typically was in postmenopausal women and there was a strong association with obesity. Endometrial cancer is now the fourth most common cancer for women in the United States, with the median age of onset in women in their 50s instead of their mid-60s. It is well defined that obesity causes the overwhelming majority of endometrial cancer. Compared to just three years ago, this equates to almost 10,000 more cases and more than 2,000 additional deaths due to endometrial cancer in the United States. Alarming, in the past 10 years, the incidence of endometrial cancer in young premenopausal women has increased dramatically because of earlier onset of obesity.

Obesity has multiple effects on metabolism. The presence of insulin resistance and hyperinsulinemia is thought to promote both tumorigenesis and tumor progression because of an increase in the production of estrogen and androgens, as well as a decrease in sex hormone binding globulin (SHBG), which increases the availability of free estrogen and androgen. Local inflammation also is believed to play a significant role.<sup>10</sup> Insulin resistance and hyperinsulinemia are associated with an increased risk of endometrial cancer, particularly in overweight/obese women.<sup>11</sup> Women with type 2 diabetes (non-insulin-dependent) have increased insulin levels for long periods of time, both before and after the disease onset, and it is associated with an increased risk of atypical endometrial hyperplasia and endometrial cancer, independent from obesity.<sup>12</sup> Insulin reduces the liver production of SHBG. Chronically high insulin due to insulin resistance increases the production of testosterone. Insulin stimulates the ovarian and adrenal cortex production of androgens (especially androstenedione and testosterone), which is metabolized into estrogen from the aromatase system in adipose tissue and then stimulates proliferation of the estrogen-dependent endometrial tissue. Insulin also has direct proliferative effects on the endometrium, working as a growth factor. Thus, there are several mechanisms in obesity tied to the development of abnormal endometrial tissue. Epidemiological data on postmenopausal women suggest an increased risk of endometrial cancer in populations that have insulin dysfunction, including nondiabetic women with hyperinsulinemia, diabetic women with insulin resistance, and women with metabolic syndrome.<sup>13</sup>

### BREAST CANCER

Obese postmenopausal women have significant increases in all estrogens, including estrone, estradiol, and free estradiol, which lead to elevated local estrogen levels in breast tumors that are as much as 10-fold higher compared with the level of serum estrogen. A recent publication showed that BMI and weight gain in women between 20 and 50 years of age was nearly as predictive of breast cancer risk as the Gail model.<sup>14</sup> In a study in Alberta, Canada, researchers estimated that 12% of obesity-related cancers in women were attributed to excess body mass, and the largest burden in women was an increase in breast cancer cases.<sup>15</sup>

### CARDIOVASCULAR DISEASE

In addition to cancer, obesity and hyperinsulinemia are associated with other causes of morbidity and mortality in women, in particular cardiovascular disease. Research from a 2012 study using the SEER (Surveillance, Epidemiology, and End Results) registries showed that women with endometrial cancer were more likely to die of cardiovascular disease (35.9%), followed by other causes including other malignancies, than they were to die of their endometrial cancer.<sup>16</sup> A similar study showed that women with endometrial cancer who survived their endometrial cancer at 10 years post-diagnosis were most likely to die of cardiovascular disease, suggesting that their obesity is not only associated with an increased risk of death from endometrial cancer, but also death from cardiovascular disease.<sup>17</sup> These studies support the hypothesis that obesity,

although a strong risk factor for endometrial cancer, also is a strong risk factor for cardiovascular disease.

### CHILDHOOD OBESITY

A meta-analysis showed a strong parent-child obesity association (pooled odds ratio, 2.22; 95% CI, 2.09-2.36), which varied by type of parent-child pair (i.e., parents-child, father-child, and mother-child), the child's age, the parents' and child's weight status, and the country's economic level. Stronger associations were shown in older children than in younger children, in both parents than in father-only or mother-only, in parental obesity and child obesity than in parental and child overweight, and in high- than in middle-income countries.<sup>18</sup> Obese parents have a higher probability of having children who are obese, and this obesity occurs at a much younger age than previously recognized.

### MATERNAL AND NEONATAL OUTCOMES ASSOCIATED WITH OBESITY

In a Swedish study, the risk of childhood cerebral palsy was compared in normal-weight mothers and obese mothers. Overweight mothers had an adjusted HR of cerebral palsy of 1.22 (95% CI, 1.11-1.33); mothers with Class 1 obesity (BMI 30-34.9 kg/m<sup>2</sup>) had an HR of 1.28 (95% CI, 1.11-1.47); mothers with Class 2 obesity (BMI 35-39.9 kg/m<sup>2</sup>) had an HR of 1.54 (95% CI, 1.24, 1.93); and women with Class 3 obesity (BMI > 40 kg/m<sup>2</sup>) had an HR of 2.02 (95% CI, 1.46-2.79) for their children developing cerebral palsy. Results were statistically significant for full-term infants (71% of all children with cerebral palsy), suggesting that obese women have a greater risk of having a child with cerebral palsy, and the greater the obesity the greater the risk.<sup>19</sup> Another study showed that high pre-pregnancy BMI resulted in a higher risk of cesarean delivery, with an adjusted OR ratio of 1.95 for the overweight group and 3.26 (CI, 1.57-6.76) for the obese group compared with women of normal weight. Obese women have a greater anesthetic risk, an increased risk of venous thromboembolism, and a five-fold increased risk of neonatal injury at the time of delivery.<sup>20</sup> Children born to obese women are more likely to have congenital defects, develop childhood obesity, and develop adult cardiovascular disease.<sup>21</sup>

Maternal obesity is associated with an increased incidence of infertility. Obese women have an increase in metabolic dysfunction with hypercholesterolemia, hyperglycemia, and insulin resistance.<sup>22</sup> This metabolic dysfunction creates a high androgen state, anovulation, and an increase in circulating estradiol. This endocrine dysfunction also affects the age of menarche and the development of polycystic ovarian syndrome and subfertility. In addition, hyperinsulinemia creates a chronic low-grade metabolic inflammatory state.<sup>23</sup> Among subfertile women, the chance of conception is decreased by 5% for each unit increase in BMI > 29 kg/m<sup>2</sup>.<sup>24</sup>

### LIFESTYLE MODIFICATIONS

A large U.S. study showed that a low carbohydrate diet was inversely related to weight gain (OR, 0.71), whereas a

low-fat diet (OR, 1.43) and USDA Dietary Guidelines for Americans diet (OR, 1.24) were associated with increased risk of weight gain. A low carbohydrate diet was inversely related to weight gain among women who were normal weight (OR, 0.72), overweight (OR, 0.67), or obese (OR, 0.63). A low-fat diet was associated with an increased risk of weight gain in women who were normal weight (OR, 1.28), overweight (OR, 1.60), Class 1 obesity (OR, 1.73), or Class 2 obesity (OR, 1.44) at baseline.<sup>25</sup> These findings suggest that a low-fat diet may promote weight gain, whereas a reduced-carbohydrate diet may decrease the risk of postmenopausal weight gain. Limiting energy-dense foods, such as carbohydrates, also is an important aspect of improving the underlying metabolic abnormalities that promote endometrial pathology as well as a host of other diseases.

Aerobic exercise is the most important lifestyle change that will help correct the underlying hyperinsulin state and obesity. Physical activity improves glucose uptake by skeletal muscles, which reduces insulin-resistance and insulin level independent of its influence on BMI.<sup>26</sup> Physical activity also reduces estrogen and androgen levels, which improves the endocrine dysfunction associated with obesity. In addition to the decrease in metabolic dysfunction with exercise, metformin can reduce the insulin level and the androgen level and, thus, reduce the risk of cancer in women with diabetes or non-diabetic hyperinsulinemia. In patients with polycystic ovarian syndrome, exercise reduces the insulin level and the androgen level and improves ovulation.<sup>27</sup>

## CONCLUSION

The Milken Institute calculated the direct health care costs of obesity for 2014 in the United States at \$427 billion. Together with indirect costs, such as lost productivity, the annual cost to the U.S. economy was \$1.4 trillion — more than twice what the United States spends on defense and 8.2% of the entire U.S. gross domestic product.<sup>28</sup> Obesity often starts in early childhood, and for many women continues into their early fertile years. Women's health practitioners have a unique opportunity to influence their obese patients through encouragement and referral.<sup>29</sup> The opportunities to reduce morbidity and mortality and improve their quality of life by encouraging lifestyle changes are enormous. We are in a unique position to reduce healthcare costs and improve the quality of life of obese patients and their families, as well as start to affect this staggering epidemic. We have not seen the same focus for obesity that we are seeing with the opioid epidemic. Obesity affects millions of people with significantly higher morbidity and mortality compared to non-obese populations and is an enormous cost to society. Dr. David Meldrum, a reproductive endocrinologist from UC San Diego stated in his commentary on Obesity and Reproduction in *Fertility and Sterility* in 2017, "If some mysterious phenomenon in the United States was causing three jumbo jets to crash daily with loss of all souls on board and also had caused those individuals 10-20 years of serious health issues and disability, every possible effort would be expended to

elucidate the causes and to provide solutions. However, ... public health efforts to tackle this crisis (of obesity) have been frustrated by many factors."<sup>29</sup> Obesity is responsible for a 10-fold increased mortality when compared to the mortality for opioid overdose. When are we going to take this staggering epidemic at least as seriously we are taking the opioid epidemic? ■

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## CME/CE QUESTIONS

1. In the study by Bateman et al, what was the median number of opioid tablets consumed by women after cesarean delivery?
  - a. 10
  - b. 20
  - c. 30
  - d. 40
2. Obesity is a risk factor for which of the following?
  - a. Infertility
  - b. Endometrial cancer
  - c. Cardiovascular disease
  - d. All of the above
3. Based on AUGS Consensus Statement, anticholinergic medications in women with overactive bladder:
  - a. should be used as a first-line treatment.
  - b. are strongly associated with cognitive impairment.
  - c. have no associated risks.
  - d. are the only treatment for overactive bladder.

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