As health care professionals, most of us witness firsthand the toll that being overweight or obese has on health. From the emergency room to radiology to sleep centers, obese patients represent extra challenges to providing quality health care. The medical issues are often quite apparent; the economic toll of obesity on hospitals, private practices, and health care systems is less obvious, but may be even more devastating on public health, now and in the future. As Steven M. Safyer, MD, president and CEO of Montefiore Medical Center, said at a June press conference, obesity “is the most significant public health crisis the country has faced since HIV and tuberculosis.”

In this issue of infocus, we look first at defining the problem. You may be aware that one-third of Americans are classified as obese, according to the Centers for Disease Control and Prevention (CDC). But did you know that in the Bronx, 70 percent of adults are overweight or obese? Obese people tend to have shorter lifespans, but they also develop many chronic, long-term, expensive-to-treat obesity-related conditions, including hypertension, type 2 diabetes, asthma, arthritis, and cancer.

From the First Lady to the Mayor of New York, high-profile individuals are promoting the fight against obesity, while states and cities have developed an array of programs for adults and children. Our medical centers have implemented system-wide changes to make them more conducive to healthy lifestyles. Important parts of this discussion address the economic ramifications of obesity on our health care system. Direct costs are on the rise. This is due partly to increased utilization of routine medical services, such as more visits to endocrinologists or cardiologists, and also partly due to the need for specialized services and equipment, such as stretchers and toilet facilities. Beyond this are the indirect costs, ranging from higher rates of school dropouts to lower household incomes. A recent report found that Americans’ obesity resulted in $190 billion a year in additional medical spending—that is, 20.6 percent of US health care expenditures. We will look at who is paying for that, how weight affects health care coverage, and what our reimbursement models are for obesity-related health care.

We look at our hospitals and professionals as the front line in the fight to care for patients with obesity-related ailments. The focus is on steps we can take to create safe and welcoming environments for obese patients in our hospitals, clinics, and private offices. Leaders in our institutions have spearheaded the creation of care maps to guide and standardize the treatment of obese individuals, such as the ones created for obese pregnant women and for obese surgical patients.

Viewing the issue from a different perspective, our chief nursing officer shares her insights on the effects of obesity on employee health and productivity. Are there concerns that some colleagues might have to work a little harder because an obese fellow employee is not able to do his or her fair share? This issue also contains a discussion of the importance of communication training with colleagues and patients so that the health care staff, in the hospital or physician’s office, can take on the role of the advocate for a healthy lifestyle.
THE MEDICAL IMPACT OF OBESITY

The ill effects of being overweight or obese affect almost every organ system. Research shows that obesity can shave years off someone’s expected life span and is associated with a multitude of comorbidities that adversely impact quality of life. Obesity in childhood carries a “double whammy” of short- and long-term effects.

Does Obesity Increase Mortality?

Whereas studies conducted more than 30 years ago found that those with a higher BMI faced a higher risk of death, newer studies have fine-tuned the association. For instance, Van Itallie 8 in 1979 reviewed large-scale databases from insurance companies and the American Cancer Society, some including millions of people, and found a generally linear association between weight and mortality rates. More recent studies, however, have found a link only between severe obesity (BMI ≥ 35) and mortality, with contradictory findings for those who are overweight (BMI 25.0–29.9) or mildly obese (BMI 30.0–34.9).

Jerant and Franks9 studied data from almost 51,000 people who participated in the 2005 Medical Expenditures Panel Surveys (MEPS).

Obesity: The New Norm in New York City

Imagine looking down to earth from outer space, and being asked to pinpoint where in the world obesity rates are the highest. You might be startled to realize that some areas served by our New York metropolitan member hospitals are in the “red zone” for overweight and obesity. Consider some statistics:

- New international data from the Organization for Economic Cooperation and Development (OECD) show that the United States has the highest obesity rate of the 34 countries analyzed. In 2010, the US obesity rate was almost 35 percent for adults, compared with rates of approximately 22.5 percent in England, 15 percent for Spain, and 7 percent for Switzerland. Just 20 years earlier, the US obesity rate was about 22 percent.

- In August, the Centers for Disease Control and Prevention (CDC) released new statistics analyzing obesity rates by state. Using self-reported data gathered through telephoning a nationally representative sample of 400,000 adults as part of the Behavioral Risk Factor Surveillance System, the CDC found 12 states (most in the South) in which at least 30 percent of the population identified themselves as overweight. Although the prevalence for the entire state of New York was not the greatest, it was still high at 24.5 percent. The rate for Colorado (20.7 percent) was the lowest reported. No state met the Healthy People 2010 goal to lower obesity prevalence to 15 percent.

- The New York State Department of Health reports that the statewide overweight and obesity rate (body mass index [BMI] 25+) between 2008 and 2009 was 59.3 percent. Alarmingly, the rate for Bronx County, representing about 630,000 people, was 68 percent.

- In New York City, 21.3 percent of children ages 6 to 11 are obese, compared with 19.6 percent nationally.1,5

- Between 2003 and 2007, in New York City, the prevalence of obesity was highest, and increased the most, among people living in low-income neighborhoods.6

- Obesity and overweight are now the “new norm” in New York City, according to a New York City Obesity Task Force to Prevent and Control Obesity report issued May 31. The report stated, “Obesity is among the most rapidly growing serious health problems we face as Americans.”

Source: BodyMassIndexChart.org

You can also use this online BMI calculator tool: http://www.nhlbisupport.com/bmi/.

BMI Chart

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Underweight  | Normal  | Overweight  | Obese

You can also use this online BMI calculator tool: http://www.nhlbisupport.com/bmi.
Conditions Associated with Obesity

Obesity is accompanied by a host of other medical problems, including type 2 diabetes, hypertension, hypercholesterolemia, coronary heart disease, stroke, gallbladder disease, asthma and other respiratory ailments, arthritis, and depression. Moreover, obesity increases the risks of developing some cancers.

Several studies have indicated a rising risk for diabetes with increasing BMI. A 10-year observational study published recently showed that those who were somewhat overweight (BMI 25–27.4) tripled their chance of developing type 2 diabetes, whereas those with a BMI of 27.5 or more quadrupled their risk. Another report found those with a BMI > 40 are seven times more likely to develop type 2 diabetes. The high prevalence of obesity in New York City may be a reason that one in three adult New Yorkers now has either diabetes or pre-diabetes. The link between obesity and type 2 diabetes is now so strong that a new term—“diabesity”—has been coined.

Obesity is also considered a major risk factor for new-onset asthma. Obesity increases both the prevalence and incidence of asthma, and obesity is commonly present before symptoms of asthma appear. Compared with normal-weight asthma patients, obese patients have more respiratory problems and develop more comorbidities. Even the response to anti-asthmatic medications may be different in obese individuals. The exact physiological link between asthma and obesity has yet to be identified, although both mechanical factors and inflammation are thought to be involved.

For patients with rheumatoid arthritis (RA), having a BMI > 30 leads to worse RA-disease outcomes and increased risk of comorbidities. For instance, in a group of 1,600 people with early RA evaluated approximately 10 years after being diagnosed, those with BMI > 30 had higher disease activity, less chance of being in remission, more pain, and worse general health. In another study of more than 24,000 people with RA, obese patients were almost five times more likely to develop diabetes than were normal-weight patients, more than three times as likely to develop hypertension, and twice as likely to be on work disability. Although they also faced greater risks of myocardial infarction, the risk of all-cause and cardiovascular mortality was, surprisingly, lower in the obese group.

The link between obesity and cancer is tightening as more research is completed. In the United States, approximately 85,000 new cancer cases per year are believed to be related to obesity. As BMI increases by 5 kg/m², cancer mortality increases by 10 percent. Obesity increases the risk both of developing cancer and of dying from cancer.

Some illnesses associated with obesity include endometrial cancer; breast cancer; thyroid cancer; gastric cancer; leukemia; prostate cancer; liver cancer; colon cancer; and pancreatic cancer.

It is beyond our scope to discuss the physiological mechanisms that underlie why cancer risks may be higher in those who are overweight or obese. Explanations given for poorer outcomes in obese cancer patients include delayed diagnosis, comorbid illnesses, poor response to treatment, increased tendency to develop recurrent or metastatic disease, and increased surgical and radiation-related complications.
Regarding worse outcomes due to delayed diagnosis, a systematic review of 10 studies found that obese women were less likely to report being screened for cervical cancer than were normal-weight women. In a survey, family physicians described several barriers to performing cancer screening in obese individuals, including difficulty in performing the exam, inadequate equipment, and patient resistance. The timing of being overweight or obese can be a significant determinant of adult disease. For instance, for women who developed endometrial cancer, those who were overweight (BMI ≥ 25) in their 20s or 30s and maintained their overweight status throughout life had a significantly higher risk than those who gained weight in their 40s or 50s. Women who gained more than 35 percent of their initial weight in early adulthood developed endometrial cancer 10 years earlier than those who gained weight later in life.

CHILDHOOD OBESITY

Many of the same ill effects that obesity holds for adults can occur in children too. Furthermore, childhood obesity carries with it the “ticking time bomb” effect—that is, obesity in childhood or adolescence can lead to significant consequences in adulthood that affect both quality and duration of life.

As a country, the United States ranked second behind only Greece, among 33 developed countries, in having the highest rates of overweight/obesity in boys and girls. In 2011, 35 percent of boys and 35.9 percent of girls in the United States were overweight. Only in China, Korea, and Turkey were 10 percent or fewer of children overweight or obese. Boys generally have higher rates of overweight or obesity than girls.

Figure 1 illustrates obesity prevalence in New York City elementary schools. It shows that in 2009–10, a little more than 21 percent of children ages 5 through 14 were obese. That reflected a slight decrease in obesity rates between the 2006–07 and 2009–10 periods. Generally, decreases in obesity prevalence were most noticeable among children aged 5 to 6, and were greater among white and Asian/Pacific Islander children than among Hispanic or black children.

Children as young as 6 are already seen to exhibit metabolic abnormalities associated with excess weight; these abnormalities are observed in both overweight and obese children. For example, an Australian study of 283 overweight and obese children found that in the overweight group, 1.3 percent showed impaired glucose tolerance (IGT), 1.3 percent hyperinsulinism, 19.5 percent dyslipidemia, and 9.0 percent high levels of alanine transaminase (ALT)—whereas in the obese group, the rates were 5.3 percent for IGT, 38.9 percent for hyperinsulinism, 73.7 percent for dyslipidemia, and 31.6 percent for raised ALT.

Elevated levels of cardiovascular risk factors, such as blood pressure, total cholesterol, LDL cholesterol, and triglycerides, were found in an analysis of a large childhood database from Germany, Austria, and Switzerland of more than 63,000 overweight or obese children and adolescents as compared with more than 14,000 children and adolescents of normal weight. In a Dutch study, 62 percent of severely obese children 12 years old or younger already had one or more cardiovascular risk factors, with 56 percent showing hypertension, 14 percent high blood pressure, 0.7 percent type 2 diabetes, and 54 percent low HDL cholesterol.

Children can be affected by other obesity-related comorbidities as well. A study of more than 5,000 New York City public elementary school students found that 51 percent were overweight (defined as having a BMI ≥ 85th percentile for age and gender) and 11 percent both were overweight and had been diagnosed with asthma. The overweight asthmatics showed more uncontrolled asthma—as indicated by more emergency department visits—plus greater use of quick-relief medications, and more days with asthma symptoms. Childhood obesity has also been associated with enuresis and psychiatric comorbidities such as uncontrolled eating, depression, and attention deficit hyperactivity disorder (ADHD). As with adults, children with obesity have more surgically related problems, including higher infection rates, and requirements for more operative time and longer hospital stays.

A rising number of cases of type 2 diabetes in children is a troubling trend and appears strongly linked to obesity. Type 2 diabetes was formerly called “adult onset” diabetes, and is usually associated with obesity and inactivity in people who have a genetic tendency toward the disease. Before the 1990s, type 2 diabetes was rarely seen in children—but 3,600 new cases per year were reported nationwide between 2002 and 2005, with racial and ethnic minorities disproportionately affected. An even greater number of obese children present with IGT, a condition known as “prediabetes.” One study of children with IGT reported that 24 percent went on to develop type 2 diabetes within two years. These findings emphasize the need for pediatricians to routinely screen children for hypertension, dyslipidemia, and type 2 diabetes.

Looking ahead, there are indications that type 2 diabetes is developing more rapidly in children than in adults—and is becoming harder to treat. In the first large study of type 2 diabetes in children, known as the TODAY Study (Treatment Options for type 2 Diabetes in Adolescents and Youth), metformin—the only pill approved in the United States for the treatment of pediatric type 2 diabetes—stopped working for more than half of the children.
The Adverse Effects of Obesity on Hospitals and Medical Providers

As health care providers, we are front and center in combating the obesity epidemic. Here are some examples of how obesity strains our systems:

- **Obesity increases a person's risk of injury — and subsequent need for medical care.**
  - One example is a study that found that obesity increases a driver’s risk both of being in a car crash and of suffering more severe injuries. The odds of sustaining an injury of any sort are 15 percent for overweight people and 48 percent for those with Class III obesity. “Injury” includes falls, sprains/strains, lower extremity fractures, and joint dislocations.

- **Obese patients are more likely to develop certain medical problems.**
  - Obese patients are more disposed to developing urinary tract infections or pyelonephritis than non-obese patients.
  - An MRI study showed more frequent spinal disk degeneration and more severe degeneration in persons with higher BMI.
  - Obesity can be dangerous to pregnant women and their babies—with increased risks of infertility, fetal anomalies, gestational hypertensive diseases, gestational diabetes, intrauterine fetal death, a cesarean birth, and macrosomia.

- **Obesity was found to be a risk factor for greater morbidity and higher mortality during the 2009 influenza A pandemic.**

- **Obesity increases utilization of medical services.**
  - The number of physical therapy services was almost doubled in those with BMI > 35, compared with those with BMI < 30, following lower leg or ankle fracture.

- **Obese patients require more medications.**
  - Analysis of almost 10,000 adults in the National Health and Nutrition Examination Survey found a greater per capita consumption of prescription medicines by obese individuals, including medications for hypertension, to lower lipids, and to control diabetes.

- **The obese are more likely to use emergency room services.**
  - Some 39 percent of people seen in a Florida emergency room fit the obesity category compared with 26.6 percent of the general Florida adult population.

- **Operating on obese patients is more difficult.**
- **It is harder to transport obese patients.**

- **Obesity is associated with more complications, infections, and poorer surgical outcomes.**
  - It reduces patient and graft survival in kidney and liver transplantation.
  - In spinal fusion surgery, morbidly obese patients had a 97 percent increased risk of complications.
  - The risk of developing infection from major surgery for Crohn’s disease almost doubled in the obese, and increased more than sevenfold in the morbidly obese, compared with those of normal weight.
  - Obese patients undergoing total hip replacement did not recover as well as non-obese patients.
  - Obesity increased the risk of a developing a surgical site infection after colectomy by 60 percent.

- **Obese patients tend to stay in the hospital longer than normal-weight patients.**
  - After spinal fusion surgery, obese patients remained in the hospital for an average of 4.8 days versus 3.5 days for normal-weight patients.

- **Medical costs are higher for obese patients.**
  - The cost of spinal fusion surgery was $109,000 for obese patients versus $85,000 for normal-weight patients.

RESOURCES:

16. Ibid.
Many Don’t Believe Their Excess Weight Poses Health Risks

Those in the health care field may think that everyone knows about the serious medical consequences of being overweight or obese. So you might be surprised by the findings of a study conducted by Matthew Ryan, MD, and colleagues at the University of Florida. They randomly selected 450 patients who were seen in the emergency department at Shands HealthCare at the University of Florida and asked them two questions: Do you believe your present weight is damaging to your health? Has a doctor or other health professional ever told you that you are overweight? Here’s what they found:

- About 47 percent of obese and overweight men said they believed their weight was a problem, whereas 53 percent did not. For women, 62 percent of those who were obese or overweight said their weight was damaging to their health.
- Some 30 percent of those with BMI > 30 did not see their weight as a health issue.
- Only 19 percent said they had ever discussed their weight with a health care provider.
- Only 30 percent of those who reported being told by a health care provider that their weight was unhealthy agreed with that opinion.
- Of those rated morbidly obese, 39 percent considered themselves overweight, but not obese.

The study was first reported at the 2011 American College of Emergency Physicians meeting: http://emergency.med.ufl.edu/2011/10/dr-matt-ryan-usa-today-10-22-2011-many-dont-believe-their-obesity-poses-health-risks/.

Obesity: The New Norm in New York City

continued from page 4

within a few years, a higher failure rate than seen in adults, and the children then had to be treated with insulin. Even combining metformin with a lifestyle intervention program had a 47 percent failure rate.50,51 Yet there is hope that lifestyle intervention programs, such as Taking Action Together—a YMCA-based protocol designed to help high-BMI inner-city African American children—will be effective.52 Whether bariatric surgery is appropriate for children or teenagers remains a matter of debate. A 2012 study found that 2 percent of morbidly obese children with a major comorbidity underwent bariatric surgery.53,54

A controversial issue concerns whether obesity during childhood represents a risk factor for adult disease. A recent literature review examined 39 published studies and found evidence of an increased risk of type 2 diabetes, hypertension, coronary heart disease, and stroke in adults who had been overweight/obese as children. Fewer, but still positive, correlations were found for all-cause mortality, asthma, all cancers, colon cancer, kidney cancer, cervical cancer, and ovarian cancer. However, according to the authors, when the results of each study were adjusted for whether the subjects were also overweight/obese as adults, the results no longer indicated that childhood obesity was the significant factor.55

Another investigation recently published by the Third Harvard Growth Study, noting that “the appropriateness of statistically adjusting for midlife weight status is controversial from both statistical and practical standpoints,” did control for adult weight status in a secondary analysis of its data.56 These authors reported that this adjustment had little or no effect on their findings that, for women, ever being overweight in childhood increased the risks of all-cause and breast cancer death—and, for men, increased the risk of ischemic heart disease, especially if the child was overweight before puberty. It may be that more studies have to be conducted, controlling for adult weight, to firmly demonstrate the long-term effects of childhood obesity. Meanwhile, the evidence is overwhelming that excess weight carries significant health risks, and severe obesity shortens a person’s lifespan. Obesity in childhood is associated with a host of both short-term and long-term negative consequences. See “How Much Is Obesity Costing Us?” on page 10 for a look beyond the medical to the vast economic toll inflicted by the obesity epidemic.

RESOURCES:

Obesity Rates in Selected Countries

![Obesity Rates in Selected Countries](http://www.oecd.org/els/healthpoliciesanddata/49716427.pdf)

Researchers at Mount Sinai Find Link between Childhood Obesity and a Chemical in Personal Care Products

Can perfumes, lotions, or cosmetics be contributing to childhood obesity? In a study exploring the relationship between environmental chemicals and childhood obesity, investigators from the Children’s Environmental Health Center at The Mount Sinai Medical Center in New York found there may be an association between exposure to phthalates and high BMI or waist circumference.1

Phthalates are synthetic, endocrine-disrupting chemicals that can act like natural hormones. They are found in plastic flooring, wall coverings, food processing materials, medication or nutritional supplement coatings, varnishes, and perfumes, lotions, and cosmetics.

In this study, phthalate metabolite concentrations were measured in the urine of 387 black and Hispanic children in New York City, and the children were examined one year later. In those who were initially overweight, youngsters with greater phthalate levels tended to have even higher BMIs and larger waist circumferences after the year’s interval.

According to Susan Teitelbaum, PhD, of the Department of Preventive Medicine at Mount Sinai, this is the first evidence that exposure to everyday chemicals can contribute to childhood obesity, and emphasizes the importance of reducing exposure to these chemicals when possible.

Anti-Obesity Initiatives

Perhaps the highest-profile anti-obesity effort at present is the Let’s Move! campaign (www.letsmove.gov), spearheaded by First Lady Michelle Obama. Launched in February 2010, Let’s Move! takes a multidisciplinary approach to solving the challenge of childhood obesity through parental education, providing healthy foods in schools, encouraging children to be more physically active, and making healthy, affordable food accessible. A White House Task Force on Childhood Obesity was appointed as part of the Let’s Move! campaign and a report was submitted to the president containing a set of recommended actions. It states that the goal of the program is to cut the childhood obesity rate to just 5 percent by 2030. According to the this report, the American Recovery and Reinvestment Act of 2009 included $1 billion in funding for prevention and wellness investments, more than half of which was directed to prevention strategies for reducing tobacco use and obesity rates. More than $370 million supported direct community-based interventions and $120 million backed state-based efforts in all 50 states plus 25 communities in urban, rural, and tribal areas.

This past summer, Mrs. Obama toured the country as part of a nationwide collaboration with the National League of Cities to provide local mayors with tools and techniques to improve nutrition and promote physical activity, supported in part by a $1 million grant from the Robert Wood Johnson Foundation. Participating cities committed to five goals, including improving access to affordable, healthy foods at stores and schools and setting food-service guidelines.

For instance, through Get Healthy Philadelphia, 10 farmers’ markets have been opened in low-income areas. The mayor of Oklahoma City, Mick Cornett, led a city-wide dieting project through which 47,000 residents lost one million pounds (see healthycommunitieshealthyfuture.org). Another such program, funded in part by the Partnership for a Healthier America and the Blue Cross Blue Shield association (see ahealthieramerica.org/PlayStreetsRFP.org), supports street closings in 10 cities to provide safe play areas. Elsewhere, private organizations have been enlisted to work with the federal government’s program. For instance, the YMCA announced a collaboration with Mrs. Obama and the Partnership for a Healthier America by designating fruits and vegetables as snack options, and water as its preferred beverage. It will roll out the initiative in its local branches through 2015 (www.ahealthierAmerica.org/news-and-information/ymca-new-horizon-links–11/30/11).

Taking another approach, the Centers for Disease Control and Prevention (CDC) offers LEANWorks, a web-based workplace obesity prevention program (http://www.cdc.gov/leanworks/). According to the website, medical expenses for obese employees are estimated to be 42 percent higher than for people with a healthy weight. The website includes recommendations and promising practices, state toolkits and resources, and an obesity cost calculator that estimates the costs of obesity based on a company’s specific characteristics.

The CDC’s Division of Nutrition, Physical Activity, and Obesity (DNPAO) funds 25 state anti-obesity programs (see www.cdc.gov/obesity/stateprograms/statestories.html). Programs include:

- Planting seeds in Arkansas
- A Healthy Dining Program in Fall River, MA
- A joint venture with Head Start in Detroit, MI
- A bicycle-friendly trail in New Mexico
- Reducing media watching time in child care centers in New York City
- An online training course in New York promoting breastfeeding
- Mobile cooking schools in West Virginia

California ranks first among the states in spending on the health consequences of obesity, allocating about $21 billion a year. It had been in the forefront of efforts to impose a one-cent tax per ounce on sugar-sweetened beverages, but the proposal was defeated in June. The California FreshWorks Fund is a public–private partnership loan fund that has raised $264 million to invest in bringing grocery stores and other healthy food retail outlets to underserved communities.

In Michigan, Governor Rick Snyder has proposed that a statewide registry be created of children’s body fat levels. He has asked physicians to add BMI information on all patients under 18 years of age to an already existing database used to track immunization records of state residents.
In New York City, Mayor Michael Bloomberg has made fighting obesity a top priority. This June, he spoke at Montefiore Medical Center, in part to publicize efforts to limit the size of sugary drinks to no more than 16 ounces at food-service establishments. He stated, “Obesity is the only major public health issue we have that is getting worse and New York City has the courage to stand up and do something about it.” Earlier in the year, he convened a multi-agency Task Force on Obesity. Current and ongoing New York City anti-obesity initiatives include menu labeling; setting meal and vending standards for food served to students in New York City schools, hospitals, nursing homes, homeless shelters, day care centers, senior centers, and jails; installing water jets in schools; issuing more than 500 Green Cart permits for selling raw fruits and vegetables; creating Health Bucks to be used at farmers’ markets in New York City; promoting physical activity in classrooms; creating guidelines for healthier buildings, streets, and urban spaces; and promoting bicycling by designating bike lanes and creating bike-sharing systems. Goals of the Task Force are to reduce the prevalence of obesity in adults by 10 percent and in children by 15 percent by 2016.4

Additionally, the New York City Department of Health and Mental Hygiene has launched the Healthy Hospitals Food Initiative, designed to promote healthy eating and to prevent chronic diseases (see www.nyc.gov/html/doh/html/cardio/cardio-hospital-food-initiative.shtml). The program offers to assess a hospital’s current food environment, develop an action plan, and provide on-site technical assistance to implement changes. Standards have been set for patient meals, beverage and food vending machines, and cafeterias.

At Montefiore, for example, the campus has eliminated sugary beverages at all 131 sites in the Bronx and Westchester, eliminated trans fats and fried foods, and offered one percent milk in all locations. It is also a smoke-free campus. As part of the New York City Green Cart program, vendors sell fruits and vegetables at different hospital sites. Cooking demonstrations using fruits and vegetables have also been held. Considering that Montefiore employs more than 18,000 people, and thousands of patients are seen throughout its campuses, these healthy food initiatives may have a great impact.

RESOURCES:
2 Ibid., p. 8.

Steven M. Safyer, MD, President and CEO of Montefiore Medical Center (center), joined Mayor Michael Bloomberg (left) and Philip Ozuah, MD, Executive Vice President, Chief Operating Officer, Chair of Pediatrics at Montefiore Medical Center and The Children’s Hospital at Montefiore (right), at Montefiore on June 5, 2012, to promote new anti-obesity initiatives developed by the Mayor’s Task Force on Obesity. Photo credit: Montefiore Medical Center.
How Much Is Obesity Costing Us?

Consider These Findings

- About $190 billion a year in additional medical spending, or 20.6 percent of the United States health care expenditures, is attributed to obesity.\(^1\)

- Per capita medical spending for obese people in the United States was found to be 42 percent greater than spending for those of normal-weight people in 2006.\(^2\)

- Worldwide, obese individuals have direct medical costs that are approximately 30 percent greater than normal-weight peers.\(^3\)

- If trends continue, by 2030, 86.3 percent adults will be overweight or obese; and 51.1 percent, obese. Total health care costs attributable to obesity/overweight are projected to double every decade to over $860 billion.\(^4\)

- The annual direct costs of childhood obesity in the United States are currently estimated at about $14.3 billion. In addition to immediate costs, current childhood obesity implies increased future direct costs when these children reach adulthood.\(^5,6\)

For government and private payers, providers, patients, and taxpayers, these are ominous statistics. Some investigators say that the primary cause of this exponential rise in spending is the increasing prevalence of overweight and obesity—so the best solution is simply making sure that fewer people become overweight or obese.\(^7\) But before inroads can be made into solving the economic crisis of obesity, there first must be an understanding of what is costing so much—and who pays for it.

What Is Costing So Much?

First, there are the direct medical costs linked to obesity—the costs associated with diagnosis and treatment. These include outpatient and inpatient health services (including surgery), as well as laboratory and radiological tests and pharmacotherapy. In a 2011 review of 33 US studies, the authors concluded that the direct medical cost of overweight and obesity combined is approximately 5 percent to 10 percent of US health care spending.\(^8\)

As an example of the disparity in treatment costs between obese and non-obese patients, Kim and Boye compared incremental hospital charges in obese patients with or without diabetes.\(^9\) Charges for obese and morbidly obese patients were 6.1 percent and 18.7 percent higher, respectively \((p < 0.01)\) than for non-obese patients when other factors such as diabetes status, sex, age, race, hospital admission type, and even length of hospital stay were accounted for. In children, the number of hospitalizations for a diagnosis of obesity almost doubled between 1999 and 2005, with an increase in annualized costs from $125.9 million to $237.6 million in 2005 dollars between 2001 and 2005.\(^10\)

In a retrospective study of 1,286 people enrolled at a large health maintenance organization, costs were tallied for all inpatient care, outpatient services, and prescription drugs over a nine-year period. The finding: People with a BMI equal to or greater than 30 incurred 36 percent higher medical costs.\(^11\) For those in the BMI > 30 category, there was a 100 percent increase in costs for prescription drugs, a 14 percent increase for outpatient services, and a 38 percent increase for inpatient care.

Managing the comorbidities associated with obesity is one very significant source of increased costs. (See “Office Practice Implications: Medical facilities need to purchase special equipment to treat obese patients.
Health Care Environments for the Larger Patient” on page 17.) Using large databases such as the Third National Health and Nutrition Survey and the Framingham Heart Study, researchers found a direct link between BMI and the lifetime costs of treating five of the major obesity-related diseases—hypertension, hypercholesterolemia, type 2 diabetes, coronary heart disease, and stroke.13 For patients with rheumatoid arthritis, total semiannual direct medical costs were $1,683 higher for obese patients, in part because these patients underwent more total joint replacements and had more chronic pain.13

Obese patients tend to use more routine medical services than those who are not obese. This includes more frequent visits to primary care physicians, more prescription drugs—especially for hypertension, high cholesterol, and diabetes—and more physical therapy.14,15,16 Operating room time, time in the intensive care unit, and hospital stays tend to be longer for obese patients.17,18,19 Obese patients also tend to make more visits to emergency rooms, in part because they have between a 15 percent and 48 percent increased risk of sustaining an injury.20,21 Obese patients also tend to develop more infections and other postsurgical complications. For example, a study of patients undergoing colorectal surgery found that obesity increased the risk of surgical site infections (SSIs) by 60 percent, and the presence of infection increased colectomy costs by an average of $17,324. According to the authors, “pay for performance policies that do not account for this increased rate of SSI and cost of caring for obese patients may lead to perverse incentives that could penalize surgeons who care for this population.”22

Other direct costs are incurred for equipment and services unique to the needs of larger patients. To create weight-friendly environments (see “Managing Obesity Risk in the Care of Pregnant and Surgical Patients,” on page 14), hospitals and private offices are making special expenditures for bariatric equipment: $650,000 for radiographic and fluoroscopy units; $33,000 for operating room tables; $22,500 for a bed; $5,500 for a motorized wheelchair; and $4,300 for a stretcher, for example.23 Wall-mounted toilets are being replaced with reinforced models secured to the floor, doorways are being widened, waiting room chairs are being redesigned, and larger linens and examining room gowns are being provided. Entry ramps have been reconfigured and reinforced to handle ambulances that can accommodate larger patients. Surgeons, especially those who work in the abdominal region, may require specially designed, elongated equipment.24 All these generate thousands of dollars in costs.

For some departments, obesity can have a substantial budget impact. This is particularly an issue for obstetricians who often manage pregnant obese patients. Why? Because obesity raises a woman’s risk of having a miscarriage, developing complications (especially with gestational diabetes and hypertension and venous thromboembolism), and requiring a caesarean birth (see “Managing Obesity Risk in the Care of Pregnant and Surgical Patients”). According to the American Congress of Obstetricians and Gynecologists, there has been a 70 percent increase in the number of women entering pregnancy while obese over the past decade. During pregnancy, the obese mother often requires more check-ups, consultations (nutritionists, sleep specialists, anesthesia), and testing (for fetal genetic anomalies and maternal markers of health). During labor, there are added costs for using the operating room, challenges with anesthesia (increased risk of respiratory depression, need for higher doses of anesthetics), requirements for special intravenous lines, and greater use of internal fetal monitoring. After delivery, babies of obese mothers are more likely to develop complications and be admitted to the neonatal intensive care unit.25,26

Radiology also incurs extra costs due to obesity.27 A person’s weight and body diameter can determine which imaging techniques are available to them—taking into consideration whether the table can support the patient’s weight, whether the patient can fit into the machine’s gantry or bore (e.g., for MRI), or whether the area of interest fits within the imaging area of the cassette. Table weight standards exist for each imaging technique; although progress has been made in developing equipment with higher limits, exceeding those limits can damage the equipment—costs not covered by the manufacturer. (For example, the industry standard for fluoroscopy is 350 pounds, but some equipment can support twice that.) Obese patients also have a greater tendency to be claustrophobic and require sedation, and need higher doses of expensive radioisotopes for nuclear medicine procedures. Even if the department has specially designed equipment for bariatric use, transportation and scheduling can become issues. Extra staff members may be required to move and position a patient.

Beyond economic considerations, there is another downside to obesity: It can make it difficult to achieve high image quality. Although open MRIs may be more accessible to obese patients, questions have been raised about the quality of the images they generate compared with those of closed MRIs. Similarly, obesity can interfere with the quality of mammographic and sonographic images. In nuclear medicine, obese patients may not be able to undergo testing because they exceed the maximum allowable dose of radioisotopes. This raises the thorny questions of whether obese patients may be getting substandard care because their weight precludes them from receiving the same high-quality imaging available to the non-obese—

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How Much Is Obesity Costing Us?

...continued from page 11

and whether there are legal ramifications for the radiologist and/or hospital.

In addition to direct costs, there are a host of indirect costs associated with obesity. A review by Trogdon et al. broke these down into several categories:28

- **Absenteeism:** compared with non-obese workers, obese employees miss more days of work due to injury, illness, or disability. In 2005, the cost of obesity-related absenteeism was estimated to range between $77 and $1,033 per obese person per year, depending on gender and the severity of obesity.29

- **Disability:** studies found that, on average, there was a 50 percent increased risk for missing work due to a disability for obese workers, compared with those who were not obese. As a result, individuals or companies may pay higher disability insurance premiums due to higher obesity-related losses.30

- **Premature mortality:** because higher BMI is associated with disability for obese workers, obese employees miss more disability for obese workers, compared with those who were not obese. As a result, individuals or companies may pay higher disability insurance premiums due to higher obesity-related losses.

- **Presenteeism:** this refers to the effect of working at less than full capacity. In 2005, a study found that presenteeism costs attributable to obesity in the United States totaled $9.1 billion, or $350 per obese employee.31

- **Workers’ compensation:** a study by Ostbye et al. in 2007 concluded that, compared with recommended-weight employees, those with BMI ≥ 40 filed twice the number of workers’ compensation claims over an eight-year period. The cost of medical claims in the high-BMI group was almost seven times greater in the BMI ≥ 40 category and indemnity (income replacement) claims were 11 times higher. The obesity-related claims typically were injuries to the lower extremity, wrist or hand, or back; pain or inflammation; sprain or strain; and contusion or bruise.32

From an economic standpoint, obesity has surpassed smoking as a contributor to health care costs. Twenty-one cents of every health care dollar goes toward obesity-related medical conditions.33 So, setting aside medical considerations and adopting a strictly economic perspective, controlling the obesity epidemic is a fiscal imperative.

In May 2012, the Centers for Disease Control and Prevention’s Division of Nutrition, Physical Activity, and Obesity hosted the Weight of the Nation conference in Washington, DC. More than 1,000 public policy makers, health leaders, and others involved with obesity prevention and control were invited. There, Eric Finkelstein presented the results of a study suggesting that a 33 percent increase in obesity prevalence and a 130 percent increase in severe obesity prevalence may occur in the United States by 2030. He said if obesity could be limited to its 2010 levels, the combined savings in medical expenditures over the next two decades would be estimated to approach $550 billion.34

From an economic standpoint, obesity has surpassed smoking as a contributor to health care costs. Twenty-one cents of every health care dollar goes toward obesity-related medical conditions. So, setting aside medical considerations and adopting a strictly economic perspective, controlling the obesity epidemic is a fiscal imperative.

RESOURCES:


19. Slayton et al., note 16.


34. Cawley and Meyerhoefer, note 1.

Offering Economic Incentives to Lose Weight

John Cawley, PhD, is a professor in both the Department of Policy Analysis and Management and the Department of Economics at Cornell University, where his primary field of research is the economics of obesity. Dr. Cawley recently calculated that $190 billion a year in medical care costs could be attributed to obesity—almost 21 percent of US national health expenditures. This figure nearly doubled previous estimates.¹

In May 2012, Dr. Cawley was a panelist at a session on the Economic Causes and Consequences of Obesity, part of the Weight of the Nation 2012 Conference in Washington, DC, sponsored by the Department of Health and Human Services and the Centers for Disease Control and Prevention. During his presentation, Dr. Cawley said, “A lot of these costs are being borne by Medicare and Medicaid, as well as private health insurance. Everyone is paying for the obesity-related medical expenditures of other people—and that is a strong economic justification for governmental intervention to reduce obesity.”²

Dr. Cawley takes an economist’s approach to weight-loss programs. He said that the reasons most attempts at weight loss fail are debatable, but may be attributed in part to the psychology of weight loss. “When you are on a diet, you deny yourself tasty, energy-dense food and you have to exercise, which is unpleasant,” he observed. “You pay all the costs up front, but don’t enjoy any of the benefits (e.g., weight loss or increased fitness) until later.” He added that most people are only vaguely aware of the long-term impact of obesity on mortality or type 2 diabetes or other comorbidities. That is why Dr. Cawley suggested also providing economic incentives, which are tangible and immediate.

“The quirky way we provide health insurance in this country through employers means that employers have an incentive to improve the health of their workers ... to save on health insurance premiums,” Dr. Cawley noted. “Increasingly, a lot of employers are trying some really creative things in the workplace to incentivize and reward the healthy behaviors of employees,” he said during a podcast promoting his book, The Oxford Handbook of the Social Science of Obesity: A Comprehensive Survey of Obesity-Related Research.³

As an example, he spoke about a study of a worksite wellness program that had some participants post forfeitable “bonds” to see whether financial incentives would motivate them to follow a weight-loss program. Almost 2,600 participants were divided into groups, with some having to post bonds of $9.95 per month. Failure to reach monthly weight-loss goals resulted in forfeiting all or part of the bonds. The study found that those who posted bonds lost, on average, a minimal amount (2 pounds) more in the long run than those in other groups, whereas those who stood to forfeit all of their bonds lost more than those who risked only part of their bonds. “Our conclusion is not that financial incentives cannot work, but that they didn’t really work well in this [particular] setting,” remarked Dr. Cawley.

An exciting variation on this theme is a program being launched this fall involving Humana Inc.—one of the nation’s largest health insurers—and the retail giant Wal-Mart. More than one million people under the age of 65 who participate in the HumanaVitality program will get a 5 percent discount on Wal-Mart’s line of “Great for You” products, including fresh, frozen, and canned fruits and vegetables; fiber-rich whole grains; low-fat dairy; nuts and seeds; and lean meats. By offering immediate financial discounts, plan promoters hope to see more healthy foods in the shopping baskets of program participants.⁴

RESOURCES:
3. Podcast available at http://www.youtube.com/watch?v=jHmgr03kMhU.

Photo: Rudd Center for Food and Obesity.
Managing Obesity Risk in the Care of Pregnant and Surgical Patients

Beyond their risk for generally higher mortality and a propensity toward coexisting medical issues, obese patients’ problems can be aggravated when they are pregnant or are surgical candidates. For example, obesity carries with it concerns for both mother and fetus unrelated to known difficulties in labor and delivery. At the same time, obese patients experience more postsurgical complications and present extra problems with sedation, rousing, and medication. This article examines some ways in which FOJP institutions are responding to the care needs of these patients.

A Care Map for Overweight and Obese Pregnant Women

Eighty percent of pregnant women seen at Montefiore Medical Center in the Bronx are overweight or obese, and 40 percent are obese, according to Ellen J. Landsberger, MD, MS, Associate Professor of Clinical Obstetrics and Gynecology and Women’s Health at the Albert Einstein College of Medicine. Many of the patients come from a culture where overweight is “the norm” and, once a woman becomes pregnant, she may be urged to “eat for two.” Often, these women are simply unaware of the dangers of obesity during pregnancy.

But physicians caring for obese pregnant women confront the ramifications of obesity and pregnancy daily. “We learned from cases reviewed in the Safe Motherhood Initiative of the New York State American Congress of Obstetricians and Gynecologists (ACOG) that more than 50 percent of maternal mortalities occurred in women who were obese,” said Dr. Landsberger. “Data from the Obstetrical Patient Safety program of FOJP member hospitals indicated that adverse outcomes, including gestational diabetes and hypertension, were more likely with increasing BMI.”

Alarmed by this information, FOJP created a working group consisting of representatives from its member hospitals to develop best practices for managing obese pregnant women and, hence, reduce risk. The team was led by Dr. Adam Buckley, then of Beth Israel Hospital. It extensively reviewed published clinical research and expert opinions related to obesity and pregnancy, to develop evidence-based practices. The group consisted of OB-GYNs, anesthesiologists, neonatologists, and nutritionists. Supported in part by a grant from the United Hospital Fund, the Maternal Obesity Care Map (MOCM) was introduced in November 2011. “The MOCM really aims to heighten awareness and good care by identifying those elements of care that will improve outcomes,” said Dr. Landsberger, who noted that the map is divided into recommendations for Prenatal Care, Labor and Delivery, and Post-Partum Care. Guidelines specify that during prenatal care, BMI should be measured at every visit to determine baseline weight and changes during pregnancy. Because of the risk of undiagnosed diabetes or prediabetes, it is recommended that women undergo a glucose challenge test (GCT) in the first trimester and then again in the second trimester if the first test is normal. It also suggests that obese pregnant women be screened and tested for obstructive sleep apnea, which Dr. Landsberger believes to be a frequently underdiagnosed cause of maternal and fetal problems in obese women, and something not routinely assessed. Patients are given an educational brochure, Obesity & Pregnancy, which describes some of the problems that obesity might cause for women and their babies. This publication can be downloaded from ACOG’s website, http://www.acog.org.

Calling for an anesthesia consult as part of prenatal care fits into the goal of anticipating problems before they happen. At first, some anesthesiologists questioned why they were being brought in so early. “We realized we have to educate patients and physicians as to the high-risk nature of obesity in pregnancy and create a higher level of alertness for these patients. Now, the anesthesiologists respect and understand why this makes sense,” said Dr. Landsberger.

One very popular feature of the MOCM is the nutrition consult with an OB-GYN staff registered dietitian (RD). Part of the grant funding is directed to cover the costs of the nutritional consultations, which often are not reimbursed by insurance. For many of these women, it represents their first opportunity to speak with an RD. “My goal is to teach obese pregnant women how to eat healthy and not gain more than 15 pounds during pregnancy,” said Paola Mora, RD, Montefiore Medical Center. “Unfortunately, by the time they see me, they may be 30 to 50 pounds above where they should be.”

With the MOCM in place, most patients get a nutritional consult once a month, and more frequently if they have problems with blood glucose control. They receive information about what foods to eat and which to avoid, and to control portions and be more physically active. Even though the goal is not to induce weight loss during pregnancy, some participants do lose weight once they start being careful with what and how much they eat. “My no-show rate has significantly declined, and I have a very good retention rate through the postpartum period,” said Ms. Mora. She also noticed that most of the obstetricians and specialists in maternal-fetal medicine are sending their patients for the consults.

During labor and delivery, obese patients are assessed and treated prophyllactically to prevent deep vein thrombosis and pulmonary embolism. A neonatologist is requested to attend the delivery to manage any potential problems with the baby. And because it can be difficult to monitor contractions with an external tocodynamometer in obese women, an intrauterine pressure catheter is recommended along with a fetal heart rate monitor. If the patient undergoes a caesarean...
Latha Sivaprasad and Dr. Sivaprasad are members of FOJP’s SWAT team—whose mission is to create standardized best-practice protocols to drive safer practice and reduce risk, by consulting experts in a variety of fields and utilizing published outcomes data. “The SWAT team is a product of the vision of FOJP’s President and CEO Lisa Kramer, who reached out to the CEOs of FOJP’s member hospitals to help identify physicians who are passionate about patient safety,” said Dr. Sivaprasad. Under the leadership and guidance of the SWAT team many committees have been established, all in support of specific initiatives emphasizing training, safety and quality.

“We are hoping to apply what we have learned from bariatric surgery to all obese patients undergoing surgery,” said Obesity Care Map Committee team member Daniel Herron, MD, FACS, Chief of Laparoscopic and Bariatric Surgery at The Mount Sinai Hospital. For example, bariatric patients are more likely to suffer from potentially life-threatening sleep apnea. Although it is impractical for all obese surgical patients to have an overnight sleep study to evaluate them for apnea, Dr. Herron suggested that all be screened with a focused questionnaire. Those found to be at higher risk can be monitored more closely during the postoperative stay. Obese patients can also have anesthesia consults prior to surgery and may undergo cardiac and metabolic evaluations as needed. Other lessons learned from bariatric patients are the need to look for deep venous thrombosis, pulmonary embolism, respiratory difficulties, skin breakdown, and infections. Obese patients may require higher doses of medications, such as antibiotics or anesthetics.

The result of the SWAT team’s efforts is a Care Map for the obese surgical patient. The thought is that by identifying best practices, standardizing protocols, and broadly educating hospital staffs in its use, risks will be reduced and quality of care will improve. “I think it is really innovative to have a Care Map for this patient population. I don’t think anything like this exists elsewhere,” said Dr. Sivaprasad. “Having four institutions sharing best practices and driving agendas to push for patient safety is definitely a step in the right direction.” The Care Map for the obese surgical patient is expected to be rolled out shortly.


Creating a Care Map for Obese Surgical Patients

Bariatric surgeons whose primary focus is operating on the overweight and obese are well versed in the challenges presented by these surgical patients, and guidelines are in place to help manage them and reduce risk.1 “However, the standards we use for obese patients undergoing elective surgery are not always applied to the obese patient who is not having surgery for weight loss, but rather is undergoing other surgeries, such as hip replacement, back surgery, or gall bladder removal,” said Peter Shamamian, MD, Chief of the Division of General Surgery and Chief Quality Officer at Montefiore Medical Center. “I think it is really important to develop treatment plans around obesity so that surgery can be done safely and effectively. If we don’t take appropriate steps to manage risk, [these patients] will think we have failed them.”

Ordinarily, women come in for their first postpartum visit six weeks after delivery, but the MOCM suggests bringing in patients earlier, after two to three weeks. “We want to identify any problems early, such as difficulties with nursing, blood sugars, hypertension, or depression,” said Dr. Landsberger. During the postpartum visit, patients are counseled about contraception and weight control, including the possibility of bariatric surgery if indicated.

“Reducing risk can mean a lot of things,” Dr. Landsberger said. “For obstetricians, we want to reduce risk for the sake of the mother and baby. For insurance companies, they want to reduce complications and financial risk. If the Care Map can help us improve outcomes, it is a win/ win for everyone.”

Dr. Latha Sivaprasad

Dr. Peter Shamamian

Danny Sherwnter, MD, Director, Bariatric Surgery, Maimonides Medical Center; Pratt Vemulapalli, MD, Director, Bariatric Surgery, Montefiore Medical Center; and Harry Adler, MD, FACS, Assistant Director, Division of General Surgery, Maimonides Medical Center—has been meeting regularly for about two years. It recently tackled the issue of what was the best pharmacological treatment for DVT prophylaxis. “The American College of Chest Physicians 2012 Chest Guidelines did not even comment on the obese patient as being part of a high-risk surgical population,” noted Dr. Sivaprasad. After much discussion, relying on their expert experience and published evidence, the group made its own recommendations.
Special Care Needed for the Obese Elderly

According to a new government report, in the period between 2009 and 2010, 38 percent of Americans aged 65 years and older were obese.1 Twenty years earlier, 22 percent in this age group were obese. While many of the same concerns regarding mortality and morbidity due to obesity in younger people hold true for the elderly, age-related changes in body composition, physiology, and lifestyle may necessitate changes in management and care for older people.

- Current clinical guidelines concluding that overweight and obesity are major risk factors for increased morbidity and mortality may not be applicable to older individuals. In a systematic review, studies using BMI as an indicator of excess weight found that the optimal range for the lowest mortality in the elderly was overweight (BMI between 25 and 30) or mildly obese (BMI between 30 and 35). The authors say that new guidelines are needed specifically for the older obese patient.2

- The same review concluded that the majority of studies found that BMI per se is not the most appropriate predictor of morbidity and mortality in the elderly because it is not sensitive to age-related changes in body fat redistribution.3

- Several meta-analyses indicate that mortality and morbidity associated with overweight and obesity in the elderly increase only at BMI greater than 30. For this reason, according to the authors of a recent review, weight-loss treatments should be offered only to older patients who are obese rather than overweight and who also suffer from functional impairments, metabolic complications, or obesity-related disease.4

- For older persons, weight loss therapy should aim to minimize muscle and bone loss. Elderly people are at increased risk of developing sarcopenic obesity, a combination of an unhealthy excess of body fat with loss of muscle and fat-free mass, including bone.5 Decreased muscle mass, reduced strength, and changes in muscle composition increase the risk of adverse outcomes, including functional limitations, institutionalization, and mortality; these risks are multiplied when combined with obesity.6

- The first step in the management of obesity in the elderly should be a change in diet, along with a multicomponent exercise regimen of flexibility and balance training, aerobic exercise, and resistance train-

RESOURCES:

3 Ibid.
5 Ibid.
7 Mathus-Vliegen et al., note 4.
Obesity has long been considered by many to be a behavioral disorder resulting purely from eating too much and/or exercising too little, a view suggesting that overweight individuals are weak and lacking in willpower. Even some physicians have been reported as regarding their obese patients in these terms. It is thus not surprising that one publication went so far as to call disparagement of obese persons “the last socially acceptable form of prejudice.”

Attitudes such as these may be changing, however, as a result of a growing understanding that obesity is a complex, multidimensional condition with a possible genetic component—compounded by national lifestyle shifts toward fat-rich diets and sedentary habits.

This shift in attitude carries with it positive implications for the focusing of medical intervention on the epidemic of obesity, because overweight individuals who feel comfortable with health care services that are welcoming and nonjudgmental may be more likely to get treatment—not only for their excess weight, but also for serious comorbidities such as diabetes, high blood pressure, and heart disease.

To provide the care that overweight patients need and will seek out, some health facilities and physicians’ offices may have to provide larger-sized equipment and furniture while also modifying their physical infrastructure. Of equal importance is the creation of an environment that is free of weight bias and staffed with personnel trained to accommodate the unique sensitivities and needs of overweight and obese patients.

“Sensitivity” might require a provider’s attention to such otherwise mundane considerations as parking, office entry, medical equipment, supplies, and even office reading material.

More subtle changes, such as providing private areas for weighing and using nonstigmatizing language, can have a tremendous impact. Research has shown that if patients or parents of an obese child perceive that a health care provider or practice exhibits weight bias—even unintentionally—they may seek a new doctor or, even worse, discontinue or avoid preventive health services and future medical care. Ironically, weight bias can lead to patients’ overeating, refusal to diet, and inactivity.

Physical Accommodations and Office Procedures
The physical requirements of your office should be supplemented with attention to your office procedures. Have you ever had the disconcerting experience of visiting a nursery school and being asked to sit on one of those tiny chairs? Then you can understand what a larger-size patient may feel as soon as he or she walks into a physician’s waiting room. It is important to provide comfortable seating at any point where waiting might occur.

A handy checklist to make office environments more welcoming to the larger patient has been prepared by the Yale Rudd Center for Food Policy and Obesity, a nonprofit research and public policy organization devoted to improving the world’s diet, preventing obesity, and reducing weight stigma (http://www.yaleruddcenter.org/). It suggests providing armless chairs or sofas that can support more than 300 pounds. Chairs should be spaced 6 to 8 inches apart. Providing a three-seater couch with no arm separators can also be a discreet way to offer proper seating. Bathrooms should have properly mounted grab bars, floor-mounted toilets, and split lavatory seats with handled urine specimen collectors.

Many people—particularly those who are obese—are very sensitive about being weighed. Unless weight monitoring is medically indicated (e.g., for infants, children, pregnant women, individuals on weight-loss programs, or those who have medical problems), consider giving patients the choice of being weighed or not. And always measure a patient’s weight in private. This relatively small change in procedure can greatly improve the health care experience.

Equipment Needs
A recent report by the New York City Health and Hospitals Corporation detailed some costs that hospitals have incurred associated with accommodating larger patients:

- At Coney Island Hospital, purchase of a special size radiographic fluoroscopy unit, for $650,000

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- At Woodhull Medical and Mental Health Center and Lincoln Medical and Mental Health Center, new operating tables with up to 750-pound capacity, at a cost of more than $33,000 each
- New bariatric beds at Coler-Goldwater Specialty Hospital and Nursing Facility, for more than $715,000

Other hospitals have implemented changes such as making available stretchers and wheelchairs to accommodate patients who weigh up to 1,000 pounds; new loading ramps; ceiling lifts; and wider doorways. Jacobi Medical Center recently installed 40 toilets to support patients weighing up to 500 pounds. Facilities managers might also give thought to providing larger-sized linens and examining gowns, and reinforced bedpans.

According to a 2006 survey of health care providers, 91 percent did not have a scale that measured more than 300 pounds. However, having a scale with a wide, sturdy platform with support handles that can record weights of more than 350 pounds is probably a necessity today for any clinician who sees adults—and even those who see children. Consideration should be given to having at least one examination room with a wide bariatric table, bolted to the floor. A hydraulic tilt table can also be helpful. Keep available a wide, well-balanced stepstool with a handle to make the exam table more accessible. The room should be equipped with large and extra-large examining gowns and blood pressure cuffs (for patients who have an upper-arm circumference >34 cm). It is also helpful to have extra-long phlebotomy needles, tourniquets, and vaginal specula available.

Eliminating Weight Bias in Your Practice

The rising prevalence of obesity in the United States has given physicians an increased role in its identification and management. Considering the public health implications of obesity, it is important that physicians increase their knowledge of obesity and related comorbidities, and recognize it as a complex disorder that requires long-term follow-up and care. A survey of almost 2,500 overweight and obese women found that the majority (69 percent) said they had experienced weight bias from a doctor—and almost half of this 69 percent had experienced this sort of bias more than once. Patients perceived bias from staff as well, including nurses, medical students, psychologists, and dietitians. Weight bias is generally defined as negative judgments of an overweight or obese individual based on stereotypes—such as being incompetent, lazy, or lacking in self-discipline— which may result in unfair treatment, prejudice, and discrimination.

“Not in my practice,” you say? Is it possible that a nurse in your office has muttered, before taking a patient’s vital signs, that she has to look for the “large-size” blood pressure cuff? Have you ever said to a parent that you would like to discuss a child’s “weight problem”? Has your nurse ever repeated a patient’s weight out loud where others could hear? All these scenarios might be considered examples of weight bias. Studies also show that physicians may fail to document obesity in patients’ charts, avoid discussing weight loss with patients, spend less time providing health education to obese patients than to non-obese patients, and underutilize practices that promote lifestyle changes in patients, including referring an obese patient to a nutritionist. Having physicians and staff broach the subject of too much weight with more grace is important, as researchers say that callous language is demotivating to this patient population and keeps them away from the doctor’s office.

A recent online survey of a national sample of adults asked their opinions of 10 common terms used to describe body weight—terms that can be used interchangeably, without thought or reason. Specifically, they were asked whether the terms were undesirable, stigmatizing, blaming, or motivating to lose weight. (See “Choosing Your Words Wisely.”) As the authors concluded, “Choosing [their] words wisely, and using weight-based terminology that patients feel comfortable with, may help [physicians] facilitate a positive, productive discussion that communicates support and respect for patients, rather than stigma and blame.”

The AMA offers specific suggestions about how to have a conversation with patients about their weight. It suggests first asking permission from the patient to discuss his or her weight (“I would like to talk to you about your weight. Is that OK?”), initiating a discussion about the patient’s medical problems that are obesity-related (“What do you know about the risk of being overweight?”), explaining BMI, reviewing changes in body weight over time regardless of the patient’s BMI category, and asking open-ended, nonjudgmental questions (“What aspect of your weight would you like to talk about?”).

A Medically Supervised Weight Management Program at Mount Sinai

More than a decade ago, Robert T. Yanagisawa, MD, an endocrinologist, was recruited to Mount Sinai School of Medicine to join the bariatric surgery/metabolic team. His main role was to address the endocrine issues that arose before and after bariatric surgery. In time, the team came to understand that there were patients who either were not interested in surgery for weight loss or did not meet the criteria for surgery. “We realized we really had nothing else to offer them. So we started a medical side to the weight management program,” said Dr. Yanagisawa.

The medical program is geared to patients who need to lose more than 30 pounds. During the first phase of this plan, which generally lasts 13 weeks, the goal is for patients to lose weight rapidly (3 to 5 pounds per week) under medical supervision. Regular meals are replaced by a recommended menu of nutritionally complete shakes and regulated entrees, which are purchased from an online supplier. Phase two is weight maintenance, which lasts between 6 and 18 months. During this time patients are enrolled in weekly small group sessions led by registered dietitians, with the goal of developing healthy lifestyle skills and slowly adding back nutritious regular foods. Throughout the program, patients receive medical checkups, blood tests, and medication adjustments. Dr. Yanagisawa discourages using weight-reducing medications, instead emphasizing behavioral and diet and modifications.

The Medically Supervised Weight Management Program (www.mountsinai.org/weight) works in conjunction with the bariatric surgery unit. “People tend to gravitate to one or another approach based on their preference,” said Dr. Yanagisawa. Bariatric surgery may be suggested for patients who have failed other medical programs or who are morbidly obese.
A safe and sensitive environment for larger patients requires staffing by well-prepared employees. You can eliminate potentially embarrassing situations by making sure staff members know techniques to safely transport and assist overweight patients. It may also be helpful to designate specific staff members to assist the largest patients. Because even an inappropriate giggle or groan can undermine the patient’s trust, schedule some office-wide sensitivity training sessions, or perhaps encourage all staff to take the Rudd Center CME course or other courses that might be provided within the community. (This may also open up conversations about whether the environment is conducive to overweight or obese employees.) Educating professional staff about obesity and the challenges of weight management may significantly decrease the “blame the victim” mentality that permeates public attitudes about the obese. To assess whether your environment is weight-welcoming, ask patients relevant questions in an anonymous patient-satisfaction survey, or consider contacting a patient advocate or patient advocacy organization (such as the Obesity Action Coalition, http://www.obesityaction.org/) for an on-site evaluation.

RESOURCES:

Choosing Your Words Wisely

A serious consideration for the health care providers who play such a key role in obesity prevention and treatment is the terminology they employ to describe excessive body weight. This is particularly so in view of recent studies suggesting that the choice of words used by physicians and staff to characterize obesity can influence patients’ emotional well being—and even their utilization of health care services.

With one-third of American youth and two-thirds of adults overweight or obese, weight bias is an important clinical concern for all health care providers. In 2010, a nationally representative sample of more than 1,000 adults was surveyed about perceptions and preferences for terms that could be used to describe weight in the medical setting. Terms included “weight,” “unhealthy weight,” “weight problem,” “overweight,” “high BMI,” and more. The graphic below shows descriptive words that were perceived to (1) stigmatize a person because of his or her weight (orange) or (2) motivate a person to reduce his or her weight (green).

No weight-based term was found to be completely free of stigma or blame. The survey authors suggested that providers ask patients what words or labels they would feel most comfortable with.

Neutral words like “weight” and “unhealthy weight” were rated as the most preferred (and least stigmatizing) terminology for physicians to use when discussing excess weight, while “morbidly obese,” “fat,” and “obese” were rated as the most stigmatizing or blaming. Survey results also found that “unhealthy weight” and “overweight” were the most motivating terms for encouraging weight loss—versus “fat” or “chubby,” which were rated among the least motivating terms.

Talking with a patient about his or her weight can expose sensitive issues. But if the subject is approached carefully, this conversation need not hamper a practitioner’s efforts at managing obesity. Rather, when respect for the patient’s feelings is made clear, the discussion can prove positive, productive, and motivating in the direction of better health.
In real life, nurses and other workers routinely make lifts such as this many times during a single shift.

Excessive lifting has long been seen as contributing significantly to the high level of employee injuries in the health care industry. Government statistics reinforce this view. The US Bureau of Labor Statistics (BLS) reported that, over the decade from 1995 to 2004, nearly 800,000 workers in nursing, psychiatric, and home health settings were injured or became sick while on the job—with musculoskeletal disorders identified as the most common type of nonfatal injury or illness. To put this in perspective only three other BLS employee categories reported more musculoskeletal complaints than did the health care employee group. However, matters may be improving, evidenced by the emergence of a trend toward slow decreases in the annual number of musculoskeletal-related cases among health care workers. This is credited in part to increased awareness and implementation of safe handling procedures. As of April 2012, a total of 10 states had enacted legislation addressing safe patient handling. New York and New Jersey were among them. The legislation suggests that a comprehensive program be established in health care facilities in which policies are established that include guidelines for securing appropriate equipment and training, collection of data, and evaluations for safe patient handling.

Who Pays the Price If Coworkers Are Overweight or Obese?

The overall annual cost attributed to obesity on the part of full-time employees in the US workplace was estimated in 2010 to exceed $73 billion. One way or another, the toll imposed by obesity is shared by workers and employers.

- **Increasing workload for colleagues.** Elevated absenteeism is directly associated with higher BMI. Thus, women with BMI > 40 miss almost one week more of work per year than non-obese women. And short-handed staffs have to work harder.

- **Falling short on performance.** Another potentially costly effect of obesity is increasing “presenteeism,” which refers to workers’ being less productive even when they show up for the job. This can be particularly frustrating when poorly performing co-workers are expected to accomplish certain assignments but do not work up to expectations. Some individuals may say that their obesity restricts their activity; others may respond more slowly to requests to change locations. One study found that very obese men lost the equivalent of almost 22 days of work—almost one month of full-time work per year—because they were less productive. The cost of presenteeism was greater than the costs of either medical expenditures for obesity or those resulting from absenteeism.
Spending more on medical care. Weight-related diseases account for nearly 10 percent of medical spending—on everything from heart disease treatments to diabetes medications. This means that each overweight employee can cost almost $17,000 every year in extra medical-related absences and direct health care expenses.1

Claiming more workers’ compensation. A Duke University Medical Center analysis found that obese workers filed twice the number of workers’ compensation claims, had seven times higher medical costs from those claims, and lost 13 times more days of work from work injury or work illness than did non-obese workers. The results showed 5.8 workers’ compensation claims per 100 employees with normal weight, versus 11.65 claims for morbidly obese workers. Moreover, the average medical claim cost per 100 employees was $7,503 for normal-weight employees, as compared with $51,019 for the obese.2

Figures such as these make it clear, from an employer’s point of view, that reducing obesity in the workplace can result in healthier and more productive employees who have better attendance records. Furthermore, leaner employees tend to incur fewer obesity-related health care costs, possibly translating into health plan premium savings. At the same time, from the co-workers’ point of view, think about how helping your colleagues to lose weight can improve the job experience—and confer the satisfaction of knowing that your fellow workers may enjoy better health.

Losing Weight Where You Work

Employee wellness programs that encourage weight loss are becoming more common as organizations take note of the increased productivity, reduced health care utilization, and cost savings associated with a healthier and leaner work force. In this regard, the Centers for Disease Control and Prevention is offering guidance to employers through LEANWorks, a website designed to help businesses address obesity among their employees. LEANWorks includes interventions such as fitness classes, lunchtime health education sessions, and weight management programs. Similarly, the Center for Nutrition Policy and Promotion, in the Department of Agriculture, is also working to improve the nutrition and health of Americans. The goals and tools available on its website, www.shapeup.com, include MyPlate, which illustrates the five food groups by using a familiar mealtime visual: a place setting (http://www.choosemyplate.gov/).

The “Weight is Over” program offered at Beth Israel Medical Center is a representative example of approaches offered to employees and the community. This eight-week weight-management and -reduction plan incorporates the four pillars of weight loss: exercise, nutrition, motivation, and recovery. Together, these elements support weight-loss goals by teaching skills and techniques needed to make permanent changes.

At Mount Sinai Medical Center, employees benefit from “Live Well, Eat Well, Stay Well, Be Well,” a program launched to promote physical fitness, weight loss, and smoking cessation. Employees and the community also benefit from Mount Sinai Greenmarket, open every Wednesday in June through November, where shoppers can buy locally grown fresh fruits and vegetables. In addition to fresh food items, there are cooking demonstrations, samples, and educational materials on healthy living. Some hospitals are outsourcing their employee wellness programs. One such outside company is ShapeUp, which offers to develop virtual, private social networks to encourage participants to work and challenge each other to meet fitness and weight loss goals (www.shapeup.com). On the flip side of this, the Robert Wood Johnson Medical Center in New Brunswick, New Jersey, has just opened its own state-of-the-art fitness and wellness center, offering employees and the community the services of personal trainers, nurses, physical therapists, nutritionists, and exercise physiologists (www.rwjfitnessnewbrunswick.com).

As a nurse or clinician today and an integral part of the team focused on patient safety and quality, you are on the front line of the health care delivery system. Consider these three matters on which you need to concentrate in the battle against the epidemic that is obesity:

1. Bring safe patient handling to the foreground, ensuring a healthy work environment.

2. Be a role model and educator for the patients you see and the colleagues you work with.

3. Become the agent of change and advocacy at work, at home, and within the community.

RESOURCES:


8 Finkielstein et al., note 6.


Sugar beverages have been eliminated from all 131 Montefiore Medical Center sites in favor of fruit- and vegetable-infused water.
Need to Lose Weight, Track Fitness, Change Lifestyle? There Is an App for That!

Since the launch of Apple’s App Store in 2008, approximately 550,000 apps have become available, with more than 25 billion downloads (Apple, Inc., 2012). By 2016, it is anticipated that more than 44 billion apps will have been downloaded. The store currently offers 9,000 mobile health apps (including nearly 1,500 cardio fitness apps, more than 1,300 diet apps, in excess of 1,000 stress and relaxation apps, and better than 650 women’s health apps) and that number was expected reach 13,000 this year. Research company Technavio predicts that the global mobile health applications market will reach $4.1 billion by 2014, up from $1.7 billion in 2010. Nearly 10 percent of all cell phone users in this country were said to have downloaded at least one of these apps to help track or manage their health, according to a 2011 Pew Research Center Internet survey.

But the question is: Do they work?

To determine whether these smart phone and tablet apps are effective, researchers at Brigham Young University analyzed 127 popular downloads and rated them on their ability to get users to modify aspects of their lifestyles. Most fell short of this goal, the researchers found, because the apps weren’t based on sound scientific theories proven to create real behavioral change.

Apps are really designed to create social engagement with others struggling to handle similar concerns—not to address individual behavior. According to the firm that markets the social networking app Fitocracy (https://www.fitocracy.com/), app developers generally do not have the resources available to review literature or consult experts. This app is aimed at those who are new to fitness, or who are trying to lose weight and want to connect to people with similar interests around health and fitness.

New offerings in 2012 are avoiding terms such as “exercise,” yet are encouraging people to be active in ways beyond the typical workout. New services recognize that some overweight/obese people are more comfortable finding ways to be active at home, whereas other services are rewarding successful weight loss with free tools or services based on achieved goals.

To understand what offerings are out there, here are descriptions of three currently popular apps:

- **MyFitnessPal** (http://www.myfitnesspal.com/apps) is a diet and fitness community built with the purpose of providing the tools and support needed to achieve weight loss goals. Some of its individual apps include (1) the runtastic Pedometer, which tracks daily steps and calculates calories, distance, and pace; (2) the MIO Active Connect, which measures and records heart rate, calorie intake/burn, and motion (steps, speed, and distance); and (3) the Endomondo Sports Tracker, which measures duration, distance, and calories, offers audio feedback on the way, and lets friends give pep talks “live” during exercising.

- **SparkPeople** (http://www.sparkpeople.com/mobile-apps.asp) is a diet and fitness monitor featuring customized fitness programs and trackers to record workouts, current weight, and water intake. It includes nutritional advice and menu planning, which, along with a calorie counter, are built into the app for tracking food on the go.

- **Weight Watchers** offers an app (http://www.weightwatchers.com/templates/marketing/marketing_utool_1col.aspx?pageid=1191321) that puts its fully integrated approach to eating, healthy habits, exercise, and a supportive environment at the user’s fingertips.

One obesity expert—Sherry Pagoto, PhD, a licensed clinical psychologist and an associate professor of medicine at the University of Massachusetts Medical School—doesn’t find many strengths in the mobile apps available to date. Dr. Pagoto’s analysis concludes that there are many limits in app functionality, including a “narrow range of behavioral strategies.” Dr. Pagoto writes that “research so far shows that mobile apps are no more effective than traditional methods of performing the same functions of reducing dietary intake or weight. The app market is so saturated that it is difficult for consumers to determine the difference between apps, and to date, no one has presented a real ‘game changing idea.’” However, in a recent post, Dr. Pagoto did acknowledge that, “lacking a strong social support system for your weight loss effort may be holding an individual back from success.” Thus, someone without strong social support might consider dipping a toe into the stream of cyberspace.

RESOURCES:

3. Van Wagenen et al., note 1.
5. Van Wagenen et al., note 1.
From the Chief Medical Officer

It is no joking matter when we say that the United States faces an outsized public health menace in the form of an obesity epidemic that’s associated with more than 400,000 premature deaths annually—plus elevated risks of heart disease, type 2 diabetes, and colon, breast, and endometrial cancer. Moreover, vast numbers of Americans bear the psychological pain of being stigmatized because of their obesity. Combined, these realities demand solutions (plural, since there will be no single answer) that can come only from the focused efforts of all those concerned—including health care organizations, researchers, clinicians, insurers, patients, and families.

At the same time, health care providers countrywide are working to meet the challenge of modifying their practices to accommodate the requirements of delivering care to an increasingly obese population, where one-third of adults and one-sixth of children are too heavy. These new approaches range from the design and implementation of plans for safe patient handling, to the development of procedures minimizing worker injuries that stem from handling obese patients, to the details of clinical care maps for overweight individuals.

In this context, a special focus for FOJP concerns the effective communication of obesity-related medical issues and care techniques to non-bariatric surgeons, nurses, and other providers who may have limited experience with these matters. Diseases themselves may sometimes be difficult to diagnose in the obese patient, and obesity itself is associated with increased complications in the perioperative and postoperative patient.

As you read in this edition of infocus, one project, under the leadership of SWAT team member Dr. Peter Shamamian, is the development of best practices and standardized treatment plans for the obese surgical patient. Acknowledging that several comorbidities may be prevalent in obese patients, the goal of the treatment plan is to address potential issues preoperatively, therefore reducing and avoiding risk. Our expectation is to integrate these templates of care into our hospital systems, with the long-term goal of extending the treatment plans and associated protocols to the overall general care of the obese patient—across the continuum of the health delivery system.

Our next edition of infocus will review the work being done regarding hospital medicine, which describes a medical discipline dedicated to the delivery of comprehensive medical care to hospitalized patients. Activities include clinical care, teaching, research, and leadership. Hospital medicine is not a subspecialty of medicine, but a concept of shared responsibility, authority, and accountability that addresses the challenges of inpatient care in conjunction with patient safety. Physicians whose primary focus is hospital medicine are called “hospitalists,” a term first coined in 1996 by Robert Wachter, MD, and Lee Goldman, MD, in The New England Journal of Medicine.

For FOJP committees, the next step in the development of best practices and standardized treatment plans requires involvement from a broader effort of collaboration of the health care team for the co-management of the perioperative patient. Members of the patient-care team include hospitalists, intensivists, nocturnists, anesthesiologists, surgeons, and nurses—all assuming key roles designed to improve safety and quality of care—but how do they all communicate effectively and share in responsibilities? The need for standardized protocols optimizes the clinician’s ability to minimize risk; reduce readmissions; focus on quality, safety, and resource utilization; and improve outcomes.

I welcome your thoughts about the work we are doing through the committee process. If you have any comments or questions, please call or e-mail.

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What’s on the Label?

Health care professionals agree that the relationship between diet and health is important. Eating habits can help or hurt a patient’s overall health and well-being. Good eating habits include being a smart shopper and selecting foods that reflect the FDA’s Dietary Guidelines for Americans. Knowing how to read food labels is especially important for people with health conditions, such as high blood pressure or high cholesterol, and need to follow a special diet.

1. **Serving size.** The basis for determining number of calories, amount of each nutrient, and % DVs of food.

2. **Amount of calories.** To manage weight (lose, gain or maintain), the left side shows how many calories in one serving. The right side shows the number of calories in one serving that come from fat.

3. **Limit these nutrients.** Eating too much total fat (including saturated fat and trans fat), cholesterol or sodium may increase your risk of certain chronic diseases. The recommended goal is to stay below 100% DV for each of these nutrients per day.

4. **Get enough of these nutrients.** Eating enough of these nutrients may improve your health and help reduce the risk of some diseases and conditions.

5. **Percent (%) Daily Value (DV).** This section tells you whether the nutrients in one serving of food contribute to your total daily diet. The % DVs are based on a 2,000-calorie diet. Each listed nutrient is based on 100% of the recommended amounts for that nutrient.

6. **Footnote with daily values (DV).** The footnote provides information about the DVs for important nutrients for those who eat 2,000 or 2,500 calories each day.

http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm079449.htm