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Obesity Management in Primary Care During and Beyond the COVID-19 Pandemic

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ABSTRACT

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With 6.1 million United States cases as of early September 2020, the coronavirus disease 2019 (COVID-19) pandemic is presenting unprecedented challenges to primary care. As a complex multifactorial chronic disease, obesity is a significant risk for severe COVID-19 complications associated with high morbidity and mortality. Sustainable lifestyle changes and weight loss can be effective to address obesity and its complications. With COVID-19 expected to persist for the foreseeable future, treatment and prevention of obesity is more imperative than ever. This report summarizes how obesity management and lifestyle counseling can be incorporated and applied in primary care during and beyond the COVID-19 pandemic.

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Introduction

Since the novel coronavirus disease 2019 (COVID-19) began in Wuhan, China, in December 2019, more than 26 million cases and 876,000 deaths have been reported worldwide as of early September 2020.¹ The United States has been hit hardest, with more than 6.1 million cases and 187,000 deaths as of early September 2020.¹ As more is known about this pandemic, obesity and obesity-related chronic conditions are emerging as significant risk factors for COVID-19.² With proinflammatory state, dysregulation of the immune system, and compromised pulmonary functions, obesity has one of the strongest associations with COVID-19–related hospitalization and complications.^{3,4}

Despite the high burden of obesity (42.4%) in the US, particularly among low-income and minority populations (49.6% among non-Hispanic Black adults), it remains underdiagnosed and undertreated in primary care.⁵ Lifestyle interventions and weight loss have been consistently shown to significantly improve morbidity.⁶ For example, approximately 5% of weight loss has been shown to reduce risk of developing diabetes by 60% as well as lead to clinically meaningful reductions in fasting glucose, triglyceride, and systolic and diastolic blood pressures.⁶ In the setting of the COVID-19 pandemic and the subsequent lockdowns and restrictions, the prevention and management of obesity and obesity-related conditions is even more paramount now than ever. This review summarizes how obesity management and lifestyle counseling approaches can be incorporated and applied to promote wellness among primary care patients, which can be conducted remotely via telehealth.

Setting and Mode of Care Delivery

Although the pandemic has fundamentally changed, at least temporally, the delivery of health care with significant limitations of face-to-face interactions, opportunities to prevent and manage obesity and obesity-related conditions remotely via telehealth have been expanded.⁷ However, with many individuals losing their jobs and employer-based health insurance during the pandemic, providers need to be aware and advocate for health care cost coverage as not to cause unexpected financial burden to patients. This may include confirming patients' health insurance status and reimbursement plans before appointments and supporting patients with no or inadequate coverage to navigate the insurance process. Furthermore, it is essential to work closely with the coding team and remain up to date with the evolving billing requirements, such as documenting duration of visits and telephone vs video encounters.

Although more studies are needed, there is evidence remotely delivered lifestyle interventions can be as effective as in-person visits for weight management.^{8,9} In the Practice-based Opportunities for Weight Reduction (POWER) trials, the average weight loss at 24 months was similar for remote and in-person lifestyle intervention participants at 4.6 kg and 5.1 kg, respectively.⁸ Google, Zoom, Skype, Doxy.me, and Updox are some of the video platforms that can be used for telehealth; however, telephone (audio only) remains widely available and used at this time of significant digital divide and disparity.^{10,11} Lack of time and the multitude of issues primary care providers address can make it difficult to provide effective lifestyle counseling during a typical visit. Therefore, for individual visits, longer initial telehealth sessions (eg, 30-60

minutes) with subsequent shorter (eg, 15–30 minutes) follow-up visits every 1 to 3 months could be considered to specifically address weight management and lifestyle interventions. For groups, providers or trained staff, such as a nutritionist, can lead weekly sessions for the first 3 to 6 months, followed by monthly sessions.¹²

Assessment

The etiology and pathophysiology of obesity is complex, involving genetics/epigenetics, neurohormonal regulations, immune system, microbiome, circadian, nutrition, physical activity, and environmental and psychosocial factors, along with adaptive changes that counteract weight loss maintenance.¹² As such, there is no simple, “one-size-fits-all” solution to the management of obesity because there are significant variations in response to treatments. Thus, starting with a comprehensive assessment of patients for management of obesity and lifestyle counseling is essential. This includes taking a thorough medical, psychosocial, and lifestyle history, such as weight history, eating habits, physical activity, stress, and sleep patterns.

The impact on individuals of the COVID-19 outbreak and lockdown should be explored and addressed, such as job loss, isolation, stress, and food insecurity. Possible underlying and contributing conditions, such as eating disorders, mental illness, substance use disorder, and obstructive sleep apnea, need to be identified and addressed. Patients’ readiness and engagement can be assessed and improved using such tools as stages of change model and motivational interviewing.^{13,14}

Medications and supplements need to be carefully reviewed, and alternatives to weight-promoting medications should be considered. In addition to lifestyle modifications, weight loss medications should be considered for patients with a body mass index of ≥ 30 kg/m² or ≥ 27 kg/m² with comorbidities.⁶ Furthermore, patients should be evaluated to determine whether they meet criteria for referral to weight loss programs or bariatric centers at the appropriate time.

Behavioral Approaches

One of the cornerstones of the behavioral approach for obesity treatment is helping patients with SMART (Specific, Measurable, Attainable, Relevant and Time-based) goal setting and monitoring using a wide variety of tools, such as apps.¹² This may include patient-centered small short-term and longer sustainable goals for weight, eating, physical activity, sleep, and stress. For someone who may not be working or working from home during the COVID-19 outbreak, a short-term goal could be establishing a specific healthy routine for work, meals, physical activity, socializing, and sleep. A 5% to 10% weight loss goal within 6 months at a rate of 1 to 2 pounds per week would be reasonable and may lead to a significant reduction in obesity-related conditions.⁶

Behavioral approaches can provide patients with long-term skills to identify barriers, gain stimulus control, improve problem solving, enlist social support, and prevent relapses.¹² Shared medical visits or group sessions can be set up within a primary care setting to enlist social support and implement behavioral approaches. It is important to recognize patients with all-or-nothing or catastrophic thinking who may benefit from cognitive restructuring with experienced providers or behavioral therapists. Self-monitoring helps patients to make connections between their behaviors and weight change and reinforces healthy choices and activities. Self-reporting with regular remote contact, such as via telephone, can be a reasonable and reliable option to provide positive reinforcement and feedbacks for

weight loss maintenance,¹² particularly at this time of limited in-person interactions due to the COVID-19 pandemic.

Nutrition

Healthy eating with healthy portion size and daily energy intake of approximately 1,200 to 1,500 kcal for women and 1,500 to 1,800 kcal for men can lead to sustainable weight loss.⁶ Although significant weight loss and health benefits have been reported from specific diets, such as the Mediterranean, low-carbohydrate, or low-fat diets, macronutrient composition and type of diet is less important than adherence to tailored healthy eating.¹⁵

During the COVID-19 pandemic, the World Health Organization has also announced general healthy eating advice, such as eating more fresh fruits, vegetables, legumes, nuts, whole grains, and unprocessed foods, moderate use of healthy oils (such as olive and canola), drinking enough water, minimizing salt and sugar, and avoiding eating out.¹⁶ In certain cases, depending on underlying conditions and patient preferences, nutritionists may help implement specific diets or eating habits, such as intermittent fasting, which needs more research but may be an option for appropriate patients.¹⁷

The economic crisis caused by the COVID-19 outbreak has significantly increased the need for food assistance due to many individuals losing their jobs, school closures, and children who relied on school-based meals now staying at home.¹⁸ Such economic hardships have been linked to food insecurity, poor dietary quality, and obesity because people may buy and consume high-carbohydrate, nonperishable meals rather than healthy, fresh foods.¹⁹ Therefore, it is important to screen patients with simple hunger vital sign questionnaires and connect them to resources such as local food banks.²⁰

Physical Activity

The current US guidelines recommend adults to engage in at least 150 to 300 minutes a week of moderate-intensity or 75 to 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination for general health and well-being.²¹ More than 300 minutes a week of moderate-intensity physical activity may be needed for additional health benefits such as weight loss and maintenance. Additionally, moderate or greater intensity muscle-strengthening activities involving all major muscle groups are recommended at least 2 days a week.²¹ There are also health benefits from reducing a sedentary lifestyle and engaging in some level of activity. Although most adults may start physical activity slowly and increase their activities gradually, formal medical assessments can be considered for some high-risk or symptomatic patients using the American College of Sports Medicine’s guidelines for exercise testing and prescriptions.²²

During the COVID-19 outbreak restrictions, physical activity is expected to dramatically decrease, with one preliminary data estimating a 12% decline in step counts among US Fitbit users.²³ The World Health Organization promotes safe ways of staying active during COVID-19, such as not exercising if one has symptoms of fever, cough, or shortness of breath, practicing physical distancing, and washing hands if one goes out for a walk, bicycle ride, or run, engaging in regular activity with family, and reducing time spent in long periods of sitting.²⁴ Primary care providers can prescribe individualized exercise prescriptions, including the frequency, intensity, time, and type. In addition, home-based exercise programs that do not require equipment can be found through fitness phone apps or local gymnasiums and websites, such as the YMCA 360

Table 1
Suggested evidence-based best practice approaches to help primary care patients with obesity management and healthy lifestyle during and beyond the COVID-19 pandemic

Approaches	Comments
Behavioral approaches ^{6,12}	SMART goal setting and monitoring, such as 5–10% weight loss goal within 6 months at a rate of 1–2 pounds per week, establishing healthy routines, stimulus control, problem solving, relapse prevention, enlist social support, continuous contact with positive reinforcement and feedback
Healthy eating/nutrition ^{5,16}	Healthy meal planning and preparing; healthy portions and daily energy intake (about 1,200–1,500 kcal/day for women and 1,500–1,800 kcal/day for men) with more fresh fruits, vegetables, nuts, legumes, whole grains, healthy fat, and unprocessed foods. Less salt and sugar. Avoid eating out. Assess and address food insecurity.
Physical activity ²¹	At least 150–300 minutes moderate-intensity, or 75–150 minutes vigorous-intensity per week of aerobic exercise and resistance training two times per week and reducing sedentary lifestyle. Home based physical activities. Practice physical distancing outside.
Stress ²⁸	Avoid excessive news and establish healthy routines. Healthy ways to cope with stress, such as progressive muscle relaxation, deep breathing, meditations, Tai chi, yoga and exercise. CBT and mindful eating to manage unhealthy eating habits, such as binge, boredom or emotional/ stress eating. Stay socially connected while practicing physical distancing. Assess for safety risk and telehealth psychotherapy if indicated.
Sleep ²⁹	Adequate 7–9 hours of sleep a day. Sleep hygiene: regular sleep schedule, dark and comfortable bedroom, avoiding alcohol, caffeine, nicotine, television, phone, screen time before bed.

CBT = cognitive behavioral therapy; SMART = specific, measurable, attainable, relevant and time-based.

health and fitness videos.²⁵ Some home-based or video-based physical therapy programs may also be available for appropriate patients.

Stress and Sleep

Stress and poor sleep have been linked to unhealthy eating, weight gain, and obesity through neuroendocrine dysregulations.^{26,27} Sources of stress during COVID-19 may include fear of the unknown and loss of control, fear of getting sick, isolation, limited food and supplies, financial and economic concerns due to loss of job or income, working from home, and caring for families and children.²⁸ Some suggested strategies to cope with stress may include limiting exposure to news, establishing healthy routines, staying socially connected via phone/video while practicing physical distancing, and regular exercise and sleep.²⁸

For overall well-being, at least 7 hours of adequate sleep daily is recommended for adults.²⁹ Patients may be counseled on good sleep hygiene, which includes having a consistent bedtime, having a quiet, dark, and comfortable bedroom free of electronic devices, avoiding large meals, caffeine, and alcohol before bedtime, and being physically active during the day but not right before bedtime.²⁹

Deep breathing, meditation, yoga, tai chi, progressive muscle relaxation, working with a therapist, or using apps could be effective and healthy options to deal with stress.^{30–32} During this high-stress period, some may experience more mindless eating, such as binge, emotional/stress, or boredom eating. Cognitive behavioral therapy and mindful eating, which involves focusing on the present moment, paying attention to hunger and satiety cues, and making conscious healthy food choices with awareness of the body's response, may be helpful for such problematic eating behaviors.³³

Economic crisis may increase mental illness and risk of suicide; hence, it would be prudent to assess for safety, develop safety plans, and consider telehealth psychotherapy for high-risk patients.³⁴ Patients with obesity are more likely to miss medical appointments and receive less preventive care due to fear of weight stigma and bias.³⁵ Telehealth may present an opportunity to proactively engage patients with obesity in a more welcoming, safe and nonjudgmental atmosphere remotely.

Summary and Conclusions

The COVID-19 pandemic and the subsequent restrictions are presenting unprecedented challenges to primary care and preventive health services. Early observations are showing poorer outcomes for COVID-19 patients with obesity and obesity-related

conditions. Sustainable lifestyle changes and weight loss is very difficult and requires use of multifaceted collaborative patient-centered approaches, including behavioral, nutritional, physical activity, and sleep and stress management as summarized in Table 1, along with medical and surgical options when indicated at the appropriate time. However, they can be effective in producing clinically meaningful weight loss of approximately 5% and can be implemented within primary care.^{36–39} With the COVID-19 pandemic expected to remain for the foreseeable future, management of obesity and lifestyle counseling is even more imperative now than ever. Telehealth may provide an opportunity to expand access to such essential health services.

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