# Career Center Career Guide



#### **INSIDE**

Career: Supporting Physician Wellness: Health Care Organizations Seeking — and Piloting — Programs to Help Physicians Manage Their Work-Life Stressors. Pq. 1

Career: Finding Jobs as a Dual Physician Family. Pq. 7

Clinical: Obesity in Adolescents, as published in the New England Journal of Medicine. Pq. 9

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Specialty Delivery Edition Specialist Physicians

Featured Employer Profile

CompHealth.



September 2, 2023

#### Dear Physician:

As you begin your medical career, making decisions about your future is a top priority for you. Because we want to assist you in this important search, a complimentary copy of the 2023 Career Guide: Specialty Delivery booklet is enclosed. This special booklet contains current physician job openings across the country from the New England Journal of Medicine (NEJM). To further aid in your career advancement, we've also included a couple of recent selections from our Career Resources section of NEJMCareerCenter.org.

NEJMCareerCenter.org was designed specifically based on advice from your colleagues. Feedback from physician users confirms how comfortable they are using it for their job searches given the confidentiality safeguards that keep personal information and job searches private. They also value having the flexibility to search for both permanent and locum tenens positions in their chosen specialties and desired geographic locations.

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NEJM is also considered a highly valuable resource for keeping up with the latest research and clinical medicine. Our popular Clinical Practice articles offer evidence-based reviews of topics relevant to practicing physicians. A reprint of the July 20, 2023, Clinical Practice article, "Obesity in Adolescents," is also included in this special booklet.

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A career in medicine is exciting and challenging.

On behalf of the entire New England Journal of Medicine staff, please accept my wishes for a rewarding career. Sincerely,

Eric J. Rubin, MD, PhD







# Supporting Physician Wellness: Health Care Organizations Seeking — and Piloting — Programs to Help Physicians Manage Their Work-Life Stressors

By Bonnie Darves

Just when organizations were formally recognizing that many of their physicians were seriously struggling with burnout and had started to seek remedies to address the endemic problem, the pandemic hit. The timing could not have been worse, many experts on physician burnout agree, and yet, for the most part, the physician workforce navigated the added stressors of COVID-19 both admirably and competently. Physicians worked in highly functioning teams to save lives, mitigate the virus' impact on patients, and offer the highest standard of care possible under the circumstances. Many physicians also helped their organizations chart a "survival path" to navigate the operational crises the pandemic unleashed.

Organizations that employ physicians, having witnessed the steep toll that the pandemic on top of burnout took, are understandably concerned about the state of their workforce. Many organizations are actively seeking, developing, and trying out wellbeing improvement programs to help bolster physicians and other clinicians. Health care leaders are recognizing, too, that physicians are hardly exempt from "the great resignation" our country is experiencing among workers.

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Numerous approaches are being piloted or implemented, with varying degrees of success. These range from informal offerings such as hospital "wellness wagons" delivering a combination of snacks and cheering-up support and wellbeing days off for residents and fellows, to more structured programs. Examples of formal offerings include buddy systems mimicking military-type "battle buddy" practices, mental-health check-in offerings, and physician coaching resources.

The latter, when provided with anonymity guaranteed, appear to be somewhat effective for those who access them, according to Eileen Barrett, MD, MPH, a hospitalist and educator who formerly directed graduate wellness initiatives at the University of New Mexico (UNM). "Many physicians who have received coaching have benefited, and some organizations have been able to demonstrate real outcomes," said Dr. Barrett, who now practices with the Indian Health Service and has published on and advocated for national clinician wellbeing improvement strategies. She said that UNM's mental health check-ins, a "renewable" offering, were also relatively well received — 78 of the 109 physicians who booked appointments when the program launched kept those appointments.

Some organizations, such as Intermountain Healthcare in Salt Lake City, Utah, are trying several approaches simultaneously — developing a physician and advanced practice provider (APP) wellbeing center and dedicated portal and scheduling wellness-focused grand rounds and separate leadership rounds to celebrate successes and learn what clinicians are struggling with in their work. Intermountain also provides a range of peer-support forums and options for connecting caregivers, aimed at offering a confidential forum for sharing emotions.

"My task is to develop resources and learn from others around the country—and at Intermountain, we're all working on this together to determine what works and what's not helpful," said Anne Pendo, MD, an internist who is senior medical director of Provider Experience and Wellbeing at Intermountain. "What we all recognize, I think, is that we as a profession weren't well before the pandemic," she said, and that the pandemic further eroded physician resiliency. "Now we have an opportunity to try to discover ways to improve wellbeing and then implement them."

### Peer-support programs taking hold

At Intermountain, of the initiatives piloted to date, the peer-support offerings have been among the most successful in terms of uptake. Peer supporters

have trained nearly 100 physicians to serve in the role, and approximately 300 physicians and clinicians have participated. "I think it's important to position this as 'I can be a helper' if you want physicians to get involved and to ensure you offer a safe space for sharing feelings — something physicians have historically struggled with," she said, because of fear they'll be perceived as weak.

Researchers and physicians involved in developing wellness-support programs and resources are finding that although it's challenging to figure out exactly what physicians do need in support, there's growing consensus on what physicians don't want: tips and recommendations for improving their personal resilience. In other words, Dr. Barrett said, "Physicians don't want to hear about another yoga class or meditation practice."

Heather Farley, MD, chief wellness officer at ChristianaCare in Delaware, which rolled out the "wellbeing wagon" described earlier and created a Center for Worklife Wellbeing, concurred with Dr. Barrett. "What doesn't work is focusing too much on the personal minutiae, such as sleep hygiene. Whatever you offer has to support physicians "in their work environment," said Dr. Farley, an emergency medicine physician. Like Intermountain, ChristianaCare has seen a gradual but steady utilization uptake of peersupport offerings. "We're shifting away from the culture of 'shame and blame' to one that says, 'It's OK not to be OK,' and to reach out if you need help," she said.

At the University of Minnesota, which created the buddy system a few months into the pandemic and rolled out the program in a matter of weeks, the model was predicated on the recognition that Dr. Farley cites: everyone needs help sometimes, and it's important to know that someone has your back and is willing to help. In the university's program, modeled in part on both the military-battlefield scenario and observations an anesthesiologist made in the operating room during the early weeks of the pandemic, when staff members were becoming more nervous, buddies are "paired" somewhat strategically. Ideally, they're close in age, career length, and experience, so that they can both recognize and understand the stressors their buddy is experiencing — and identify when that buddy needs some extra support.

"We decided that the battle-buddy system was a brilliant idea and decided to give it a decent trial," said Cristina Sophia Albott, MD, who heads the university's division of adult mental health. "We wrote the protocol in one week, started the program in two weeks, and rolled it out across the

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entire medical school." By July 2020, more than 3,000 health care personnel, primarily physicians and nurses, had adopted and established the model.

Around the same time, the University of Minnesota implemented "listening groups" and established mental-health consultation services in each clinical department. The latter offering, however, despite the appointments being structured as confidential, wasn't as well received as the buddy program. "Unfortunately, few physicians availed themselves of those offers," she said.

On a positive note, even though the worst of the pandemic crises appear to have largely receded at the university, some departments have decided to continue with the buddy program, Dr. Albott reported. Although there's been considerable variation in how individual departments set up or later retooled their buddy programs, the initiative's early and ongoing success is a clear indicator of the offering's value, she added.

#### Desperately seeking on-the-ground support and remedies

What physicians do want in the way of support from their organizations, Dr. Barrett and others interviewed for this article agreed, is operational load-lightening, however that can be achieved and institutionalized. Offerings such as onsite childcare and schedule flexibility to address family needs rank high on the wish list for many physicians, and there's a growing consensus that the electronic health record (EHR) persists as a chief source of physician frustration and stress, despite years of organizations' attempts to ameliorate the problem.

"What does appear to work is providing physicians protected time for EHR training or having dedicated information technology (IT) support for dealing with EHR-related issues," Dr. Barrett said, or adding scribes to offload the bulk of EHR-data entry processes. In similar fashion, physicians would appreciate their institutions removing the burden of treatment prior-authorization management. And she noted that the incredibly complex and inordinately inefficient processes related to physician credentialing are ripe for fixing, as they're unnecessarily burdensome for physicians. "If credentialing were centralized, at least for Medicare, that would go a long way in reducing the burden. Most people think that the system, as it stands, doesn't really make anyone safer," Dr. Barrett said.

Health care organizations, concerned about both their physicians' wellbeing and their facilities' ability to maintain adequate staffing levels at a time when many physicians are deciding to leave jobs where they don't feel well enough supported, are taking note. They're actively trying to figure out what physicians want and need to care for patients with fewer frustrations.

Physician professional organizations are also stepping in to identify what's needed now in institutional supports to help physicians mitigate burnout and regain resiliency. The American College of Physicians' Patients Before Paperwork initiative, for example, has identified the most burdensome tasks and regulatory requirements that internists face and offered policy recommendations for reducing associated workload. The American Medical Association has also developed a multifaceted initiative to provide guidance and targeted solutions to health care organizations for many of the problems that threaten physician wellbeing.

In an article published in the *Annals of Internal Medicine* in September 2021, Dr. Barrett and her co-authors proposed a series of steps that organizations might take to reduce clinician burnout, keep physicians in the workforce as the health system continues to navigate COVID-19, and simply make physicians' practice lives more tolerable. In addition to the COVID-related recommendations for improving physician safety and providing practical support as needed to address system-capacity constraints, the authors urged organizations to do the following:<sup>1</sup>

- Help ensure more flexible scheduling for physicians who are parents or care for aging parents.
- Reduce, eradicate, or reassign administrative tasks and meetings that aren't mission-critical and haven't delivered improved patient outcomes.
- Provide no-cost and truly confidential mental-health support services, and also truly encourage physicians to use their available vacation and professional development time to nurture a healthier workplace. At the same time, organizations should update credentialing and employment applications to remove unnecessary questions related to mental and physical health diagnoses to reduce the associated stigma.

Dr. Barrett offers another recommendation to employer organizations. "If you offer resources that might support or improve physician wellbeing, make sure your physicians know about them. Physicians are so stretched and busy that they might not know what's available," she said.

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#### Tips for structuring physician-wellness support offerings

All sources who participated in this article offered guidance for organizations trying to provide resources that might help improve physician wellbeing. Here are a few:

- Understand that each environment is different, which means that the problems and needs might vary widely from one health care organization to another. To develop appropriate solutions and resources, ensure that physicians are directly involved in creating them.
- Avoid focusing resources on individual-physician resilience and instead
  focus on system approaches that might have the added benefit of helping
  physicians support one another and reduce unnecessary workload. Keep
  in mind that some physicians have an innate distrust of "corporatesponsored" initiatives that appear to be focused on the bottom line.
- Provide a safe forum for physicians to recommend institutional approaches that mitigate the burdens that contribute to burnout and also make their overall work lives more realistically manageable.
- If you try a wellness initiative and it doesn't produce results that are valuable to physicians, be ready and willing to abandon it. Then be prepared to pilot something else quickly.

<sup>1</sup>Barrett E, Hingle ST, Smith CD, Moyer DV. Getting Through COVID-19: Keeping Clinicians in the Workforce. *Ann Intern Med.* 2021 Nov;174(11):1614–1615. doi: 10.7326/M21-3381. Epub 2021 Sep 28. PMID: 34570597; PMCID: PMC8500335.

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# Finding Jobs as a Dual Physician Family

By Nisha Mehta, MD, a physician leader whose work focuses on physician empowerment, community building, and career longevity in medicine

I'm part of a dual physician family: my husband is a plastic and reconstructive surgeon, and I'm a musculoskeletal radiologist. We've been dating since college, and every few years, one of us has had to make accommodations for the other, whether it be regarding medical school, residency, or fellowship. Finding jobs has been no different.

Approaching the job market as a dual physician (or really, any dual working member) family is tricky because you have two members of a family who've invested a lot into their education and goals and are now trying to find a geographic location that can accommodate both of those things. Depending on what your interests are, it can feel next to impossible. Let's say one person has always wanted to incorporate policy work while another really wants to be at an academic institution that has niche expertise in a particular area of research — the city that has both opportunities available may not exist. Incorporate other factors, such as family support or access to interests outside of medicine, and it becomes even more complicated.

Let's say you've narrowed your list down to a few cities, though. How do you approach that job search?

**1. Cast your net as wide as possible.** Forget about the reasons a job won't work; instead, believe in the reasons why it will. Sometimes jobs that

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seem outwardly incompatible can end up being different than what you imagined, or an employer may want you enough to accommodate some requests on your part that would make it a surprisingly good fit. You've put a lot into your education, so don't limit yourself as you're crossing the finish line. Worst-case scenario, you've wasted a little time. Think about how much time you spent memorizing things during your college prerequisites, and it'll quickly bring it into context.

- 2. Network widely. Reach out to every employer in the area you have access to. Use friends, family, colleagues, or whoever else you may know that have connections to jobs in the area, and make sure they are looking for positions not just for you but also for your significant other. Look on job boards, LinkedIn, and other professional networks. You never know where something will come up.
- 3. Have a list of dealbreakers for each person. It's important to know when to cross a job off the list. One mistake I see many physician couples make is one person falling in love with a particular job and the other person compromising too heavily on another job. Unfortunately, while it may have seemed considerate at the time, in the long term, the person who took the significantly less appealing job may become resentful or decide to quit the job, possibly necessitating the job search process for both to start again in a different city because of noncompete issues.

Once you've got some options that work for both lined up, make sure you both stay active in each other's processes. It's easy to get so caught up in your interview process that you both go about your job searches independently. However, your family's happiness is going to rely on both of your jobs working well together, your significant other's happiness, and your happiness with each other's work environments. You presumably know each other better than anyone else, so having each other's input when making these decisions will be invaluable. So many times at job interviews, I've pointed out something my husband didn't pick up on that would've been problematic, and vice versa.

The jobs you pick together are going to shape what your life looks like, so approach this job search as a team. Together, you'll have a much better shot at creating the life in medicine that you want for your family.

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#### The NEW ENGLAND JOURNAL of MEDICINE

#### CLINICAL PRACTICE

Caren G. Solomon, M.D., M.P.H., Editor

# Obesity in Adolescents

Tamara S. Hannon, M.D., and Silva A. Arslanian, M.D.

This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the authors' clinical recommendations.

A 12-year-old boy with excessive weight gain that began when he was approximately 6 years of age presents for evaluation of obesity. He occasionally rides his bicycle but spends more than 6 hours per day engaging in screen-based activities (e.g., video games and social media). He drinks sugary beverages every day and eats mostly processed foods. His mother has obesity, and his maternal grandmother has type 2 diabetes. His body-mass index (BMI, the weight in kilograms divided by the square of the height in meters) is 41.9 (class 3 obesity, ≥140% of the 95th percentile for his age and sex). The fasting cholesterol level is 202 mg per deciliter (5.23 mmol per liter), low-density lipoprotein (LDL) cholesterol level 127 mg per deciliter (3.29 mmol per liter), triglyceride level 320 mg per deciliter (3.62 mmol per liter), and high-density lipoprotein (HDL) cholesterol level 43 mg per deciliter (1.11 mmol per liter). The glycated hemoglobin is 5.9% (6.8 mmol per liter), which is consistent with prediabetes. The alanine aminotransferase level is 80 U per liter, with hepatic steatosis shown on ultrasonography. How would you manage this case?

#### THE CLINICAL PROBLEM

BESITY DURING ADOLESCENCE (10 TO 19 YEARS OF AGE) IS ASSOCIATED with health consequences that include prediabetes and type 2 diabetes,<sup>1</sup> nonalcoholic fatty liver disease,<sup>2</sup> dyslipidemia,<sup>3</sup> polycystic ovary syndrome (PCOS),<sup>4</sup> obstructive sleep apnea,<sup>5</sup> and mental health disorders and social stigma.<sup>6</sup> In addition, obesity during adolescence is a risk factor for complications and death from coronary heart disease<sup>7,8</sup> as well as for death from any cause in adulthood,<sup>8</sup> including early adulthood.<sup>9</sup>

In a study involving 2.3 million persons in Israel, BMIs in late adolescence that were between the 85th and 94th percentiles and above the 95th percentile were associated with hazard ratios for sudden death and for death from coronary heart disease or stroke during adulthood of 2.2 and 3.5, respectively.<sup>8</sup> Although these associations were not adjusted for BMI in adulthood, other data indicate that decreasing adiposity between childhood and adulthood is associated with reductions in cardiometabolic risk factors.<sup>10</sup> In addition, combined data from four prospective cohort studies showed that elevated BMIs in both childhood and adulthood were associated with increased relative risks for type 2 diabetes (relative risk, 5.4), hypertension (relative risk, 2.7), elevated LDL cholesterol levels (relative risk, 1.8), and carotid artery atherosclerosis (relative risk, 1.7), whereas persons with elevated childhood BMI and normal adult BMI had risks for these conditions that were similar to those among persons with normal childhood and adult BMIs.<sup>10</sup> These studies support the importance of diagnosis and treatment of obesity during childhood and

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N Engl J Med 2023;389:251-61.
DOI: 10.1056/NEJMcp2102062
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#### KEY CLINICAL POINTS

#### **OBESITY IN ADOLESCENTS**

- Adolescent patients with obesity benefit from evaluation and follow-up according to a long-term care model with attention to and understanding of the societal stigma and pervasive weight bias that exists
- Obesity during adolescence is associated with a substantial increase in the risk of concurrent and later health consequences that should be evaluated and treated expediently.
- Intensive treatment with regard to health behavior and lifestyle, with at least 26 hours of face-to-face treatment over a period of at least 3 months, is a foundational aspect of the comprehensive treatment
- The elimination of sugar-sweetened beverages from the patient's diet is strongly recommended.
- · The use of antiobesity medications or bariatric surgery (or both) along with intensive treatment with regard to health behavior and lifestyle results in a greater reduction in body-mass index than lifestyle treatment alone and should be discussed with families, along with the caveats that weight regain is common, data regarding long-term outcomes are lacking, and these treatments are expensive.

adolescence, as well as in adulthood, to reduce obesity, although its use has limitations. 16 Highadverse health consequences.

non-Hispanic Asian adolescents (11.0%).<sup>13</sup>

Rates of weight gain accelerated during the to improve health in adolescence and beyond.

#### STRATEGIES AND EVIDENCE

#### **ASSESSMENT**

er BMI in some cases reflects increased lean The prevalence of obesity in adolescents has body mass, and in Asian populations, adiposity increased since the 1980s, most markedly in low- is increased at lower BMI levels.<sup>17</sup> In adolescents, income communities and communities of color, a BMI at or above the 85th percentile but below a difference that is at least in part attributable to the 95th percentile is diagnostic of overweight, structural racism and stigma (with negative at- and a BMI at or above the 95th percentile is dititudes creating social and economic obstacles agnostic of obesity.<sup>18</sup> Class 1 obesity is defined to health).<sup>11</sup> Among the social drivers of obesity as a BMI at or above the 95th percentile up to is the marketing of unhealthy foods and drinks.<sup>12</sup> 119% of the 95th percentile, class 2 obesity is a In the United States, the prevalence of obesity in BMI at or above 120% of the 95th percentile up the 2015-2016 period was 20.6% among adolesto 139% of the 95th percentile, and class 3 is a cents (as compared with 14.8% in the 1999–2000 BMI at or above 140% of the 95th percentile. 18 As period) — 22.0% among non-Hispanic Black ado- an adolescent's final height is reached, adult lescents and 25.8% among Hispanic adolescents, thresholds for overweight (BMI, 25) and obesity prevalences that are higher than those among (BMI, 30) apply. Severe obesity in children is both non-Hispanic White adolescents (14.1%) and defined as class 2 or 3 obesity or a BMI of 35 or higher.16,18

An evaluation of obesity in an adolescent incoronavirus 2019 (Covid-19) pandemic; a retro- cludes complete medical and medication histospective cohort study in California showed an ries and a family history. The evaluation should absolute increase in the prevalence of overweight include an assessment of obesity-related diseases or obesity of 5.2 percentage points among 12-to- and lifestyle factors as well as environmental and 15-year-olds and 3.1 percentage points among social factors, a psychosocial assessment that 16-to-17-year-olds during the first year of the panincludes screening for depression (with the use demic.<sup>14</sup> Moreover, obesity is among the most of the Patient Health Ouestionnaire-9 for Teens). common underlying conditions for Covid-19- and a physical examination (Table 1).<sup>3,18-21</sup> Elicitassociated death in persons younger than 21 ing a family history of obesity-related conditions, years of age. 15 Obesity interventions are needed including premature deaths due to cardiovascular disease or stroke, is important for assessment and discussion of familial risk.3

#### LABORATORY ASSESSMENT

Table 2 shows recommendations for laboratory BMI is strongly associated with adiposity and is tests in adolescents with obesity, including screena useful clinical tool for assessing overweight and ing for dyslipidemia<sup>3</sup> and fatty liver disease.<sup>2</sup> Con-

#### Table 1. Clinical Assessment of Adolescents with Overweight or Obesity.\*

#### Anthropometric characteristics

BMI and growth velocity according to a growth chart<sup>16</sup>

Class of obesity according to BMI

Class 1: 95th percentile to <120% of 95th percentile

Class 2: 120 to <140% of 95th percentile

Class 3: ≥140% of 95th percentile

Stature and growth status

#### Medical history and medications

Birth history — maternal diabetes, patient large or small for gestational age

Growth history — monogenic obesity (<5 yr of age with insatiable appetite), failure to thrive in infancy (the Prader-Willi syndrome)

Central nervous system injury and hypothalamic tumors

Medications associated with weight gain (e.g., atypical antipsychotic agents, glucocorticoids, and others)

Depression, anxiety, and ADHD

Adverse childhood events and food insecurity<sup>19</sup>

Conditions and findings that may indicate the possibility of rare genetic disorders: hypogonadotropic hypogonadism, hypothyroidism, and altered immune function (leptin deficiency or leptin receptor mutation); corticotropin deficiency (POMC deficiency); visual impairment, learning disabilities, and polydactyly (the Bardet-Biedl syndrome); hearing loss, cardiomyopathy, hepatic dysfunction, and renal failure (the Alstrom syndrome); and failure to thrive in infancy, hypoglycemia, corticotropin deficiency, intestinal malabsorption, and diarrhea (PCSK1 deficiency)<sup>20</sup>

#### Family history (first- and second-degree relatives)

Familial obesity, weight-loss strategies, bariatric surgery, and associated conditions

#### Diet

Quantification of consumption of sugar-sweetened beverage and juice

Habitual eating patterns, locations, and foods and portions; strategies for weight loss

#### Physical activity and sedentary behaviors

Sedentary activities and all moderate-to-vigorous physical activity

#### Systemic conditions and possible causes

Developmental — delays associated with genetic syndromes

Neurologic — headaches attributable to pseudotumor cerebri or poor-quality sleep

Respiratory — shortness of breath with or without wheezing (physical deconditioning or asthma)

Sleep — snoring, apnea, nocturnal enuresis, daytime sleepiness, ADHD (obstructive sleep apnea or poor-quality sleep)

Gastrointestinal — abdominal pain (constipation; gallbladder, liver, or gastroesophageal reflux disease)

Endocrine — irregular menses (PCOS), polyuria-polydipsia-nocturia (type 2 diabetes), hypogonadism (genetic syn-

Musculoskeletal — hip pain with or without limp (slipped capital femoral epiphysis)

Psychological — binge eating, rapid weight loss or weight cycling, purging, depression, or anxiety

#### Physical examination

Blood pressure — standardized according to sex, age, and height until 18 yr of age<sup>21</sup>

Dysmorphic features (genetic syndrome)

Papilledema (pseudotumor cerebri), rod-cone dystrophy (the Bardet-Biedl syndrome)

Thyromegaly or goiter (hypothyroidism)

Hepatomegaly (nonalcoholic fatty liver disease)

Undescended testes or delayed puberty (hypogonadism, genetic disorder)

Musculoskeletal — bowed legs (Blount disease), limp (slipped capital femoral epiphysis), polydactyly (the Bardet-Biedl syndrome)

Skin — acanthosis nigricans (insulin resistance), hirsutism or severe acne or both (PCOS), red hair and light skin (POMC deficiency)

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<sup>\*</sup> ADHD denotes attention deficit-hyperactivity disorder PCOS polycystic ovary syndrome, PCSK1 proprotein convertase subtilisin/kexin type 1, and POMC proopiomelanocortin.

sistent with guidelines of the Pediatric Endocrine MANAGEMENT predictor of elevated fasting glucose levels and ioral health provider. 2-hour results of an oral glucose-tolerance test and may be insufficient to diagnose early type 2 Lifestyle Interventions detection of early type 2 diabetes.<sup>22</sup>

ing's syndrome, are not recommended unless there is growth attenuation or other clinical in- Dietary Interventions dications. In addition, the measurement of insu- Sugar-sweetened beverages, the leading source lin concentrations to evaluate insulin resistance of added sugars in the diets of children and adoadds no diagnostic value and is not recommend-lescents in the United States, contribute to obesity ed. The diagnosis of suspected genetic obesity and additional health risks in adolescents and syndromes requires medical genetics evaluation should be eliminated from the diet, given that and often additional workup, including karyo- such beverages lack any nutritional value.<sup>29</sup> A type analysis and DNA methylation studies.<sup>20</sup> meta-analysis of prospective observational stud-Although only a small percentage of cases of ies indicated that over the course of 1 year, each pediatric obesity are attributable to a mono- additional 12-oz (0.35-liter) daily serving of genic cause, testing for monogenic causes of sugar-sweetened beverage was associated with a obesity is indicated in cases of insatiable appe- BMI increase of 0.06 (95% confidence interval, tite and severe obesity in children younger than 0.02 to 0.10, as calculated with the use of a 5 years of age.

Society and the American Diabetes Association, Management of obesity in adolescents should screening for type 2 diabetes is recommended in use a multidisciplinary long-term care model adolescents who have BMI at or above the 85th that includes attention to lifestyle modification percentile and one additional risk factor: family and consideration of pharmacologic and bariathistory of type 2 diabetes in a first- or second- ric surgical therapies (Tables 3 and 4).18 Comdegree relative, non-White race or ethnic group, munication should be considerate of the stigma physical signs or conditions associated with in- associated with the term "obesity," and the use sulin resistance (e.g., acanthosis nigricans, hy- of person-first language (i.e., "person with obepertension, dyslipidemia characterized by low sity" rather than "obese person") and preferred levels of HDL cholesterol and high levels of tri-terms such as "too much weight for age (or health glycerides, and PCOS), gestation complicated by or height)" is important.<sup>6,18</sup> Motivational interdiabetes, or intrauterine growth restriction.<sup>22,23</sup> viewing may be useful as part of a multidisci-The possibility of autoimmune type 1 diabetes plinary approach; a meta-analysis of 11 randomagainst the backdrop of obesity should be conized trials assessing the use of this technique in sidered, and measurement of diabetes-associated adolescents with obesity indicated some positive antibodies against glutamic acid decarboxylase, effects on nutrition, physical activity, and quality insulinoma-associated protein 2, and zinc trans- of life, although with no significant reductions porter 8 is recommended.<sup>23</sup> Criteria for the diag- in BMI or cardiometabolic outcomes.<sup>27</sup> Patients nosis of diabetes and prediabetes are shown in with symptoms of depression or other mental Table 2. Glycated hemoglobin testing is a poor health disorders should be referred to a behav-

diabetes or accurately reflect prediabetes.<sup>25</sup> In Summary data from randomized, controlled tripatients with multiple risk factors for type 2 als of lifestyle treatment approaches indicate that diabetes and a glycated hemoglobin level of interventions that offered at least 26 hours of 5.7% to less than 6.5% (6.5 to <7.8 mmol per face-to-face counseling regarding nutrition, physliter), an oral glucose-tolerance test is useful for ical activity, and lifestyle recommendations resulted in, on average, modest but clinically impor-Additional evaluations rely on clinical find- tant changes in the mean BMI z score (at least ings (Table 2).<sup>4,5</sup> Persistently elevated levels of -0.15 to -0.25; the z score represents the numliver enzymes (for >3 months) may prompt ber of standard deviations by which the BMI further evaluation for nonalcoholic fatty liver differs from the mean in a reference sex- and disease.<sup>2</sup> Laboratory evaluations for endocrine age-matched population). Evidence was not adedisorders that are associated with increased quate to support the recommendation of treatadiposity, including hypothyroidism and Cushment with less intensive interventions (Table 3).<sup>28</sup>

random-effects model).30

Condition	Evaluation and Recommendation	Diagnostic Criteria for Association with Obesity
Dyslipidemia³	Fasting lipid panel is universally recommended	High LDL cholesterol level: $\geq 130$ mg/dl (3.4 mmol/liter) Low HDL cholesterol level: $<40$ mg/dl (10.4 mmol/liter) High non-HDL cholesterol level: $\geq 145$ mg/dl (3.8 mmol/liter) High triglyceride level: $\geq 130$ mg/dl (1.5 mmol/liter)
Prediabetes and diabetes <sup>23</sup>	Glycated hemoglobin testing recommended at ≥10 yr of age or when puberty begins if the BMI is ≥85th percentile and one additional risk factor is present† Fasting plasma glucose is useful as a second test along with glycated hemoglobin test OGTT 2-hr plasma glucose is useful in the presence of risk factors for type 2 diabetes and if glycated hemoglobin is 5.7 to ≤6.5%	Prediabetes: glycated hemoglobin 5.7 to <6.5% (6.5 to <7.8 mmol/liter)²³‡ Diabetes: symptoms (polyuria, polydipsia, weight loss) and random plasma glucose ≥200 mg/dl (≥11.1 mmol/liter); if asymptomatic, two abnormal tests from the same sample or from two separate test samples: glycated hemoglobin ≥6.5% (≥48.0 mmol/mol), fasting glucose ≥126 mg/dl (≥7.0 mmol/liter), OGTT 2-hour ≥200 mg/dl (≥11.1 mmol/liter) limpaired fasting glucose level: 100 to <126 mg/dl (5.6 to <7.0 mmol/liter) limpaired glucose tolerance OGTT 2-hr glucose level: 140 to <200 mg/dl (7.8 to <11.1 mmol/liter)
Fatty liver disease²	ALT is not diagnostic, but testing is universally recommended	ALT level >25 IU/liter (in boys) and >22 IU/liter (in girls)?; high values vary among reference laboratories; elevated values in absence of other explanation, especially if steatosis is present on ultrasonography, are suggestive but not diagnostic
Obstructive sleep apnea <sup>5</sup>	Sleep evaluation if chronic snoring, daytime sleepiness, nocturnal gasping for air, enuresis	Sleep medicine referral indicated when sleep apnea is suspected; criteria for diagnosis on sleep study differ from those in adults
PCOS⁴	Menstrual history or evidence (clinical [hirsutism, acne] or biochemical) of hyperandogenism or a family history of PCOS	At least two of the following symptoms: hyperandrogenism, ovulatory dysfunction, or polycystic ovaries on vaginal ultrasonography, with exclusion of other endocrine conditions associated with hyperandrogenemia. Usually diagnosed in adolescents on the basis of hyperandrogenemia and ovulatory dysfunction after exclusion of other endocrine conditions associated with hyperandrogenism
Musculoskeletal disease	Radiography of hips and lower limbs if symptoms are present	Requires orthopedic expertise
Rare genetic disorders of obesity <sup>20</sup>	Referral to genetic specialist for blood or buccal swab DNA analysis if signs and symptoms are present	Test panel sequences genes and chromosome regions with clinical or molecular evidence (or both) suggestive of a role in human obesity

denotes alanine aminotransferase, HDL high-density lipoprotein, LDL low-density lipoprotein, and OGTT oral glucose-tolerance test. ting for glycated hemoglobin should be performed with the use of a method that is certified by the National Glycohemoglobin Standardization ne Diabetes Control and Complications Trial assay.<sup>23</sup>
International Expert Committee criterion for prediabetes is a glycated hemoglobin level of 6.0 to <5.5% (7.0 to <7.8 mmol/liter).<sup>24</sup>

12 13 N ENGL | MED 389;3 NEJM.ORG | JULY 20, 2023 N ENGL | MED 389;3 NEJM.ORG | JULY 20, 2023

#### Table 3. Management of Obesity in Adolescents.

#### Nutrition recommendations<sup>18</sup>

Eliminate sugar-sweetened beverages and juices and decrease highly processed foods (e.g., fast foods) and snacks

Follow dietary patterns that emphasize plant-based foods (e.g., vegetables, fruits, whole grains), lean sources of protein, high levels of fiber, and low levels of saturated fat

Eat regular meals, avoid snacking, and control portion sizes; parents should role-model eating behaviors, preparing meals at home, and eating together; avoid having calorically dense, nutritionally empty foods at home

#### Sedentary behavior and physical activity recommendations<sup>26</sup>

≤2 Hr per day of screen time outside of school and work

60 Min of moderate-to-vigorous physical activity daily

#### Antiobesity medications

In adolescents ≥12 years of age, consider use of antiobesity medication, according to medication indications, risks, and benefits, as an adjunct to health behavior and lifestyle treatment

#### Bariatric surgery<sup>18</sup>

Consider in adolescents ≥13 years of age with severe obesity: class 2 obesity, BMI ≥35, or 120% of the 95th percentile for age and sex, whichever is lower, and a clinically significant coexisting condition; or class 3 obesity, BMI ≥40, or 140% of the 95th percentile for age and sex, whichever is lower, with or without a clinically significant coexisting

Ensure that adolescents are able to adhere to principles of dietary and medical recommendations and do not have an eating disorder

Refer to a center with a surgeon experienced in pediatric bariatric surgery and a comprehensive, multidisciplinary program for presurgical, surgical, and postsurgical care with long-term follow-up

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low consumption of saturated fat are associated orders.<sup>34</sup> with better cardiometabolic risk profiles. Ketogenic diets, which are used for treating some Physical Activity Interventions seizure disorders in children, have been incorpo- Dose-response studies of physical activity in rated in some obesity treatment programs for adolescents indicate that benefits with regard to adolescents and have shown short-term safety adiposity and cardiorespiratory and cardiometaand efficacy (weight loss of 7 to 9% of the base- bolic measurements are observed with a daily line body weight at 3 to 4 months of follow-up).<sup>31</sup> average of 60 minutes of physical activity at a However, these programs have substantial attri- moderate-to-vigorous level of intensity.<sup>26</sup> Rantion, and there are insufficient data to inform domized trials of supervised interventions of long-term outcomes with these diets or with shorter durations of moderate-to-vigorous aerolow-carbohydrate diets in adolescents.

low-calorie diets) for weight loss in adolescents utes per session) have also been shown to result is not recommended. Studies have shown mixed in clinically significant cardiometabolic benefit results with the use of these diets; weight regain and reductions in percent body fat (by approxiis typical,<sup>32</sup> and there are concerns regarding mately 5 to 6%).<sup>35,36</sup> long-term acceptability and safety, including risks of eating disorders, electrolyte or other metabolic Multidisciplinary Interventions

14

Dietary patterns that emphasize plant-based going support from a pediatrician, pediatric difoods (i.e., vegetables, fruits, and whole grains), etician, and mental health professional are not lean sources of protein, high fiber intake, and associated with an increased risk of eating dis-

bic exercise or combined aerobic and strength Supervised marked caloric restriction (very-training (median, 3 days per week for 40 min-

disturbances, vitamin and mineral deficiencies, A review of 28 randomized, controlled trials of and adverse psychological effect.<sup>33</sup> Although so-multidisciplinary interventions of varying concial emphasis on patient-imposed restrictive ditent (combinations of diet, physical activity, and eting behaviors is associated with a risk of dis-behavior modification) and duration without pharordered eating, supervised multidisciplinary weight macotherapy in 2774 adolescents with obesity indimanagement and treatment of obesity with on- cated only limited efficacy, with a mean differ-

Table 4. Approved	Antiobesity M	edications for Use with Inten	Table 4. Approved Antiobesity Medications for Use with Intensive Health Behavior and Lifestyle Therapy. $st$		
Medication	Age for Use	Mechanism	Dose	Common Side Effects	Serious Adverse Events and Contraindications
Orlistat	>12	Lipase inhibitor	120 mg (oral) 3 times daily with meals	Bowel urgency, flatulence with discharge, oily stools, and rectal leakage	Fat-soluble vitamin deficiencies
Phentermine	>16	Amphetamine analogue, increases catecholamines and serotonin activity, suppresses appetite	Daily dose (oral), 15–37.5 mg; short-term use (=12 wk)	Headache, nausea, palpitations, elevated blood pressure, restlessness, dizziness, insomnia	Do not use if there is a history of cardiovascular disease, with or after use of MAO inhibitors, with uncontrolled hypertension, or with hyperthyroidism
Phentermine- topiramate XR	×12	Same mechanisms as phentermine; topira- mate is an anticonvul- sant with weight-loss side effects	Daily dose (oral): initial 3.75 mg phentermine and 23 mg topiramate XR for 2 wk; increase (as side-effect profile indicates) to 7.5 mg and 46 mg; if weight loss <3% after 12 wk, increase (as side-effect profile indicates) to 11.25 mg and 69 mg, then to 15 mg and 92 mg; must wean to decrease dose or discontinue	Headache, nausea, palpitations, elevated blood pressure, restlessness, dizziness, insomnia	Same contraindications as phentermine; teratogen, so must use reliable birth control. Use with caution with history of seizures, renal stones, or depression.
Liraglutide	>12	GLP-1 receptor agonist; delayed gastric emptying, increased satiety response, de- creased appetite	Daily dose (subcutaneous administration): initial, 0.6 mg for 1 wk; increase at weekly intervals, as side-effect profile indicates, in increments of 0.6 mg per day to a target dose of 3 mg once daily	Gastrointestinal symptoms: diarrhea, nausea, vomiting, constipation, dyspepsia, abdominal pain	Black-box warning: risk of thyroid C-cell tumors. Thyroid C-cell tumors in rodents; contraindicated in patients with a personal or family history of medullary thyroid carcinoma; in patients with acute kidney injury, gallbladder disease, or a history of pancreatitis
Semaglutide	≥12	GLP-1 receptor agonist; delayed gastric emptying, increased satiety response, de- creased appetite	Weekly dose (subcutaneous administration): initial, 0.25 mg once weekly for 4 wk; adjust dose (as side-effect profile indicates) over 4 wk (0.5 mg, 1 mg, 1.7 mg, and 2.4 mg) to effect	Gastrointestinal symptoms: diarrhea, nausea, vomiting, constipation, dyspepsia, abdominal pain	Black-box warning: risk of thyroid C-cell tumors. Thyroid C-cell tumors in rodents; contraindicated in patients with a personal or family history of medullary thyroid carcinoma; in patients with acute kidney injury, gallbladder disease, or a history of pancreatitis
Setmelanotide†	9<	Melanocortin receptor agonist; increased satiety	Daily dose varies according to age (0.5 to 3 mg) and is adjusted to effect	Skin hyperpigmentation, gastro- intestinal symptoms, derma- tologic adverse events	Depression, suicidal ideation, adverse sexual reactions (prolonged spontane- ous erections)
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GLP-1 denotes glucagon-like peptide 1, MAO monoamine oxidase, and XR extended release. Setmelanotide is approved for use in adolescents with POMC, PCSK1, leptin receptor deficiency,

ence in BMI of 1.18 with intervention as compared tions is difficult to assess.

#### **Antiobesity Medications**

has improved the outcomes of multidisciplinary weight-loss programs in clinical trials.<sup>38-40</sup> Antiobesity medications that have been approved by the Food and Drug Administration for use in without a multidisciplinary treatment strategy. adolescents are shown in Table 4. Orlistat, a li- Given the chronic nature of obesity, BMI is expase inhibitor, is associated with flatus, oily spotting, and fecal urgency and incontinence obesity medications. After participants had a — side effects that limit use in adolescents.<sup>41</sup> 6-month withdrawal from liraglutide in a ran-Phentermine, an amphetamine analogue that domized trial of liraglutide, the difference in the suppresses appetite, is approved for short-term BMI from baseline was less than 2%, 38 Because use (≤12 weeks) in adolescents older than 16 years antiobesity medications are associated with subof age and is approved in combination with topi-stantial cost, adverse effects, and a still-uncerramate in adolescents at least 12 years of age tain benefit-risk ratio over the long term, diswhen accompanied by counseling that topira- continuation of the medication is suggested if mate is a teratogen and information regarding there is no BMI reduction after administration at appropriate contraception. 40,42

Randomized, placebo-controlled trials have different medication may be considered. shown the effectiveness of two glucagon-like peptide 1 (GLP-1) receptor agonists — liraglu- Bariatric Surgery tide and semaglutide — in adolescents when In a cohort study involving adolescents, bariatric combined with lifestyle therapy. In one placebo- surgery (Roux-en-Y gastric bypass and vertical controlled trial, liraglutide (administered subcu- sleeve gastrectomy) was associated with weight taneously at a dose of 3 mg daily) resulted in a loss of approximately 26% of the baseline body greater reduction in the BMI (estimated differ- weight at 5 years (Table 3).44 Remission rates 5 ence, -4.6%) and body weight (estimated differ-years after surgery were approximately 86% for ence, -4.5 kg) at 56 weeks of treatment.<sup>38</sup> In type 2 diabetes and 68% for hypertension.<sup>44</sup> A another placebo-controlled trial, semaglutide (ad-randomized, controlled trial of surgical treatministered subcutaneously at a dose of 2.4 mg ment as compared with nonsurgical treatment once weekly) resulted in greater reduction in BMI (8 weeks of low-calorie diet) in Sweden showed (-16.7%) and body weight (-17.7 kg) at 68 weeks, a 2-year change in BMI of -12.6 and -0.2, reas well as greater reductions in waist circumfer- spectively.<sup>45</sup> ence and levels of glycated hemoglobin, lipids (except HDL), and alanine aminotransferase.<sup>39</sup> up to 8% of adolescents have major perioperative Both agents are approved for indefinite use in complications.<sup>44</sup> Long-term complications include adolescents 12 years of age and older. The major deficiencies in nutrients (e.g., iron, vitamin B., adverse effects are gastrointestinal symptoms; and folate), reduced bone mass, and weight rekey contraindications include a personal or fam- gain.<sup>44</sup> The incidence of alcohol-use disorders ily history of medullary thyroid carcinoma, acute has also been reported to be higher among ado-

Metformin is frequently administered off-label with control after at least 6 months of follow- for obesity in adolescents. In a meta-analysis of up.<sup>37</sup> Although participants reported high levels 38 randomized trials involving children or adoof satisfaction with the interventions and im- lescents (2199 participants; mean age, 13.7 years; proved quality of life, the potential effect of redaily dose range, 500 to 3000 mg; duration, 12 porting bias, attrition, and variable adherence on to 192 weeks), metformin reduced the mean BMI overall outcomes of multidisciplinary interven- by 1.1 as compared with controls.<sup>43</sup> Topiramate, an anticonvulsant that is used for migraine prophylaxis, is also prescribed off-label for obesity after observations of dose-dependent weight re-The addition of approved weight-loss medications duction as a side effect among patients who re-

There is insufficient evidence to support antiobesity medication as monotherapy in adolescents pected to increase after discontinuation of antitherapeutic dose levels for 4 months. A trial of a

Most postsurgical complications are mild, but kidney injury, gallbladder disease, or pancreatitis. lescents after metabolic and bariatric surgery, 46

although whether the disorders occur more com- by the Pediatric Endocrine Society and the Eurogical weight loss.47

#### AREAS OF UNCERTAINTY

Questions remain with regard to why the prevalence of obesity continues to increase and the effects of environmental drivers (e.g., pollution

#### GUIDELINES

Consensus recommendations for the assessment. treatment, and prevention of obesity are endorsed the full text of this article at NEJM.org.

monly in adolescents with obesity who undergo pean Society of Endocrinology.<sup>22</sup> The American surgery than in those who do not is unclear. Academy of Pediatrics recently published clinical Weight regain after surgery varies; approximate- practice guidelines that highlight the urgency of ly 60% of adolescents who were followed for providing obesity treatment (≥26 hours of con-5 years after undergoing gastric bypass main-sultation for health behavior and lifestyle changtained a reduction from the baseline body weight es, with consideration of antiobesity medicaof at least 20%, whereas 8% regained at least tions as indicated) to each patient as soon as the 95% of the initial weight lost.<sup>44</sup> Important pre- diagnosis of obesity is made.<sup>18</sup> Our recommendictors of weight regain among adolescents after dations are consistent with these guidelines, with surgery include younger age and lack of presurthe acknowledgment that the costs and limited access to these therapies and the inadequacy of long-term outcomes data for medication use are major barriers.

#### CONCLUSIONS AND RECOMMENDATIONS

and polyfluoroalkyl substances). The extent to The patient described in the vignette has severe which the increasing use of antiobesity medica- obesity that started at 6 years of age and in the tions (including more potent medications, such ensuing 6 years progressed to include coexisting as dual-agonist peptides [tirzepatide], that are conditions such as prediabetes, dyslipidemia, and currently being investigated) and bariatric sur- nonalcoholic fatty liver disease. Had we seen gery for obesity during adolescence will increase him at 6 years of age, we would have recomthe proportion of adolescents who reach and mended intensive lifestyle intervention; to date, maintain reduced BMIs is unknown, given the there are no approved antiobesity medications substantial weight regain that occurs when anti- for children younger than 12 years of age. At obesity medications are discontinued for any this time, we would recommend intensive lifereason. Lifelong treatment of obesity is needed style intervention together with an antiobesity but is burdensome and cost-prohibitive, with medication selected according to patient preferdisparities in access. Long-term data regarding ence and weight-loss effect; currently, a GLP-1 treatment effectiveness and safety, including receptor agonist would be the medication of mental health outcomes, are needed to deter- choice given the effectiveness of these agents in mine cost-benefit ratios. More attention to pubclinical trials and the ease of administration. He lic health interventions (e.g., policies to discourshould have follow-up visits every 3 months for age sugar-sweetened beverages) and community surveillance of BMI and assessment of condistrategies (e.g., infrastructure for safe, healthy tions associated with obesity and should receive environments and community coalitions) is need- treatment as needed. If surgical intervention is ed to reduce obesity in children and adolescents. indicated in the future, he should be informed of the option for referral for evaluation for bariatric surgery at a comprehensive multidisciplinary pediatric center.

Disclosure forms provided by the authors are available with

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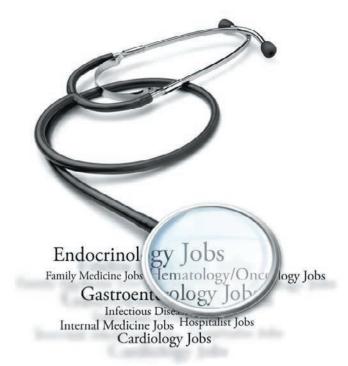
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# The NEW ENGLAND JOURNAL of MEDICINE

## **Classified Advertising Section**

#### Sequence of Classifications

Addiction Medicine Allergy & Clinical Immunology Ambulatory Medicine Anesthesiology Cardiology Critical Care Dermatology Emergency Medicine Endocrinology Family Medicine Gastroenterology General Practice Geriatrics Hematology-Oncology Hospitalist Infectious Disease Internal Medicine Internal Medicine/Pediatrics **Medical Genetics** 

Neonatal-Perinatal Medicine Nephrology Neurology Nuclear Medicine Obstetrics & Gynecology Occupational Medicine Ophthalmology Osteopathic Medicine Otolaryngology Pathology Pediatrics, General Pediatric Gastroenterology Pediatric Intensivist/ Critical Care Pediatric Neurology Pediatric Otolaryngology Pediatric Pulmonology Physical Medicine & Rehabilitation

Preventive Medicine Primary Care Psychiatry Públic Héalth Pulmonary Disease Radiation Oncology Radiology Rheumatology Surgery, General Surgery, Cardiovascular/ Thoracic Surgery, Neurological Surgery, Orthopedic Surgery, Pediatric Orthopedic Surgery, Pediatric Surgery, Plastic Surgery, Transplant Surgery, Vascular Urgent Care

Department Heads Faculty/Research Graduate Training/Fellowships/ Residency Programs Courses, Symposia, Seminars For Sale/For Rent/Wanted Locum Tenens Miscellaneous Multiple Specialties/ Group Practice Part-Time Positions/Other Physician Assistant Physician Services Positions Sought Practices for Sale

Urology

Chiefs/Directors/

#### **Classified Advertising Rates**

We charge \$10.55 per word per insertion. A 2- to 4-time frequency discount rate of \$7.85 per word per insertion is available. A 5-time frequency discount rate of \$7.55 per word per insertion is also available. In order to earn the 2- to 4-time or 5-time discounted word rate, the request for an ad to run in multiple issues must be made upon initial placement. The issues do not need to be consecutive. Web fee: Classified line advertisers may choose to have their ads placed on NEJM CareerCenter for a fee of \$130.00 per issue per advertisement. The web fee must be purchased for all dates of the print schedule. The choice to place your ad online must be made at the same time the print ad is scheduled. Note: The minimum charge for all types of line advertising is equivalent to 30 words per ad. Purchase orders will be accepted subject to credit approval. For orders requiring prepayment, we accept payment via Visa, MasterCard, and American Express for your convenience, or a check. All classified line ads are subject to the consistency guidelines of NEIM.

#### How to Advertise

All orders, cancellations, and changes must be received in writing. E-mail your advertisement to us at ads@nejmcareercenter.org, or fax it to 1-781-895-1045 or 1-781-893-5003. We will contact you to confirm your order. Our closing date is typically the Friday 20 days prior to publication date; however, please consult the rate card online at nejmcareercenter.org or contact the Classified Advertising Department at 1-800-635-6991. Be sure to tell us the classifica-

tion heading you would like your ad to appear under (see listings above). If no classification is offered, we will determine the most appropriate classification. Cancellations must be made 20 days prior to publication date. Send all advertisements to the address listed below.

#### **Contact Information**

Classified Advertising

The New England Journal of Medicine 860 Winter Street, Waltham, MA 02451-1412

E-mail: ads@nejmcareercenter.org

Fax: 1-781-895-1045 Fax: 1-781-893-5003 Phone: 1-800-635-6991 Phone: 1-781-893-3800 Website: nejmcareercenter.org

# How to Calculate the Cost of Your Ad

We define a word as one or more letters bound by spaces. Following are some typical examples:

Bradley S. Smith III, MD..... = 5 words Send CV ...... = 2 words December 10, 2007 ..... = 3 words 617-555-1234 ..... = 1 word Obstetrician/Gynecologist ... = 1 word A ...... = 1 word Dalton, MD 01622 ..... = 3 words

As a further example, here is a typical ad and how the pricing for each insertion is calculated:

MEDICAL DIRECTOR — A dynamic, growthoriented home health care company is looking for a full-time Medical Director in greater New York. Ideal candidate should be board certified in internal medicine with subspecialties in oncology or gastroenterology. Willing to visit patients at home. Good verbal and written skills required. Attractive salary and benefits. Send CV to: E-mail address.

This advertisement is 56 words. At \$10.55 per word, it equals \$590.80. This ad would be placed under the Chiefs/Directors/ Department Heads classification.

#### **Classified Ads Online**

Advertisers may choose to have their classified line and display advertisements placed on NEJM CareerCenter for a fee. The web fee for line ads is \$130.00 per issue per advertisement and \$220.00 per issue per advertisement for display ads. The ads will run online two weeks prior to their appearance in print and one week after. For online-only recruitment advertising, please visit nejmcareercenter.org for more information, or call 1-800-635-6991.

#### Policy on Recruitment Ads

All advertisements for employment must be non-discriminatory and comply with all applicable laws and regulations. Ads that discriminate against applicants based on sex, age, race, religion, marital status or physical handicap will not be accepted. Although the New England Journal of Medicine believes the classified advertisements published within these pages to be from reputable sources, NEJM does not investigate the offers made and assumes no responsibility concerning them. NEJM strives for complete accuracy when entering classified advertisements; however, NEJM cannot accept responsibility for typographical errors should they occur.

#### **Classified Ad Deadlines**

Issue **Closing Date** October 12 September 22 October 19 September 29 October 26 October 5 November 2 October 13

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The Department of Medicine at the University of Maryland School of Medicine is recruiting faculty to join our expanding programs in several divisions including Gastroenterology and General Internal Medicine. Opportunities with descriptions and application instructions are at the following link: Open Faculty Positions | University of Maryland School of Medicine (umaryland.edu). Expected faculty rank for all positions will be Assistant Professor or higher. Final rank, tenure status and salary will be commensurate with candidates' qualifications and experience.

The UMSOM Department of Medicine provides state-of-the-art patient care, and advances treatment by means of cutting-edge clinical research. We have trained high caliber physicians since 1807, including more than half the physicians practicing in Maryland. With more than 400 full and part-time faculty members, Medicine, the largest department in the School of Medicine, trains approximately 300 residents and fellows annually. Current active research funding exceeds \$180 million, over half from NIH and other federal agencies. With nearly 150 funded investigators, the department has an extensive research base in both the basic and clinical sciences, and our extensive research training programs include basic, clinical, and translational research training awards. Our faculty also conduct international research, with robust infrastructure in South America and Africa.

The University of Maryland School of Medicine is part of the University of Maryland Baltimore campus, ranked 13th in 'Forbes' 2021 America's Best Large Employers Survey and 6th by Forbes among educational institutions for Best Employers for Diversity in 2022. The majority of our clinical service is provided at the University of Maryland Medical Center in Baltimore, ranked as one of the top two Best Hospitals in both the State of Maryland and the Baltimore Metro Area by U.S. News & World Report in 2023.

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The Tower Health system includes 64 primary care ambulatory physicians (45 family medicine, 19 internal medicine) and 26 APPs.

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**Contact: Melisa Ciarrocca** Director of Provider Recruitment to learn more! Office: 910-291-7540 Text: 910-280-1337

Email: melisa.ciarrocca@scotlandhealth.org Website: www.scotlandhealth.org



#### **Joslin Diabetes Center** Senior Position in Immunology Research Relevant to Type 1 Diabetes

Joslin Diabetes Center is recruiting a distinguished senior-level scientist in the field of immunology relevant to type 1 diabetes with vision, leadership skills, and a track record of mentorship. The successful candidate will serve as Section Head and Senior Investigator in the Research Division at Joslin Diabetes Center and be nominated for an appointment as Professor of Medicine and Immunology in the Immunobiology Program at Harvard Medical School (HMS). We seek candidates whose experience, teaching, research or community service has prepared them to contribute to our commitment to diversity and excellence.

The Joslin Diabetes Center and Department of Immunobiology Program faculty focus on a broad array of scientific areas in basic and translational immunology significantly relevant to type 1 diabetes, including mechanisms of action of suppressive immune cell types, therapeutic strategies to modulate the immune system, dendritic cell biology, transplantation immunology and the development and translation of novel adoptive T cell therapies, including

Candidates must hold a M.D., and/or Ph.D., qualify for a faculty appointment as Senior Member/Full Professor. Applicants should have impactful scholarship, an established stature in the field of immunobiology and type 1 diabetes, extramural funding and a creative profile of innovative research programs that would complement high-profile research conducted by Joslin and departmental faculty and possess demonstrated leadership and administrative skills. The generous recruitment package includes an endowed chair, a highly competitive salary, ample lab and animal space, a laboratory start-up fund, a stimulating and highly collegial environment and the opportunity to hire new junior faculty. Joslin is affiliated with the Beth Israel Deaconess Medical Center and HMS.

Qualified applicants should attach a cover letter, their Curriculum Vitae, a synopsis of their past, current, and proposed future research programs, especially a vision for future research relevant to type 1 diabetes (2-4 pages). statement of teaching/mentoring and contributions to diversity (1 page), and include the names of three individuals who could provide letters. Applications should be sent to Kimberly Monaco at Recruitment@joslin.harvard.edu. Review of applications will begin immediately.

Questions regarding the position should be directed to Prof. Rohit N. Kulkarni, Senior Investigator, Joslin Diabetes Center and Professor of Medicine. HMS Recruitment@ ioslin.harvard.edu

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law. Joslin seeks candidates whose skills, and personal and professional experience, have prepared them to contribute to our commitment to diversity and excellence.



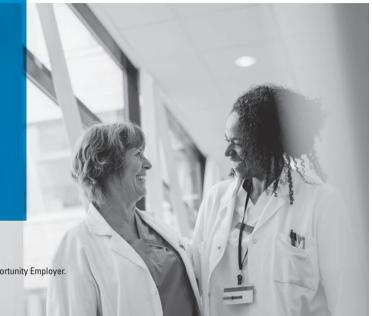


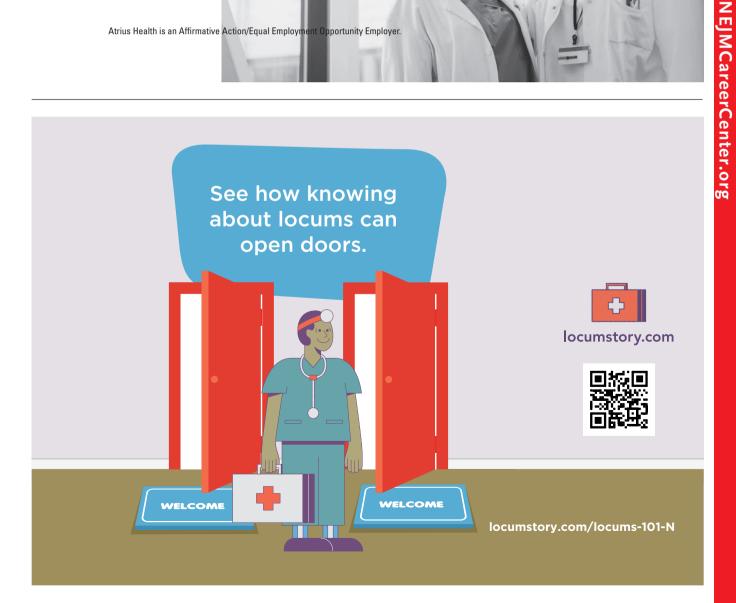
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The VA Northeast Ohio Healthcare System is seeking a full-time (8/8s) Infectious Diseases and HIV physician. Primary clinical responsibilities will include consultation on acutely ill inpatients, patients in the nursing home and dementia care units, and Veterans in our outpatient ID clinics. Qualified candidates will also provide primary care to a large cohort of HIV-positive patients in the immediate Cleveland area as well as several surrounding rural communities, through both face-to-face and virtual modalities. The qualified candidate may also assume administrative oversight of an active outpatient IV therapy program in conjunction with a pharmacy care coordinator.

Prior experience with the VA Healthcare System is highly preferred; additionally, the Louis Stokes VA is also a Spinal Cord Injury Hub and preferred candidates will also demonstrate experience with infections in patients in acute and long-term residential spinal cord injury units. As the facility possesses an attached skilled nursing facility, experience or certification in geriatric infections of Veterans in long-term care facilities will be highly considered. Academically engaged candidates with prior presentations at national meetings and willingness to participate in the education of nurse practitioners, fellows, residents and medical students are expected.

The Cleveland VA Medical Center is a teaching affiliate of Case Western Reserve University. The successful candidate will be appointed at Case Western Reserve University School of Medicine at an academic level commensurate to their experience. Preferred candidates will have completed three years of Internal Medicine training in an accredited program, as well as a fellowship in Infectious Diseases. Board Certified

Interested candidates should submit their curriculum vitae to the Federal Government's Official job site at:

http://www.usajobs.gov



Intensivist

OB/GYN

• General Pulmonology

Hospitalist Nocturnist

Neurosurgery PA

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Contact Terri Smith at 888.282.6591 or 505.609.6011 tsmith@sjrmc.net | sanjuanregional.com | sjrmcdocs.com

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- NEPHROLOGY OB-GYN PSYCHIATRY
- PRIMARY CARE RHEUMATOLOGY UROLOGY

Berkshire Health Systems (BHS) is the leading provider of comprehensive healthcare services for residents and visitors to Berkshire County, in western Massachusetts. From inpatient surgery and cancer care to provider visits and imaging, BHS offers a continuum of programs and services that help patients to connect to the care they need, no matter where they are located in the rural Berkshire community. As the largest employer in Berkshire County, BHS supports more than 4,000 jobs in the region, and, as a 501(c)(3) nonprofit organization, BHS is committed to partnering with local municipalities and community organizations to help the county thrive. Working at BHS offers a unique opportunity to both practice and teach in a state-of-the art clinical environment at Berkshire Medical Center, the system's 298-bed community teaching hospital in Pittsfield, which is a major teaching affiliate of the University of Massachusetts Chan Medical School and the University of New England College of Osteopathic Medicine in Maine.

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Michelle Maston or Cody Emond **Provider Recruitment, Berkshire Health Systems** (413) 447-2784 | mmaston@bhs1.org cemond@bhs1.org

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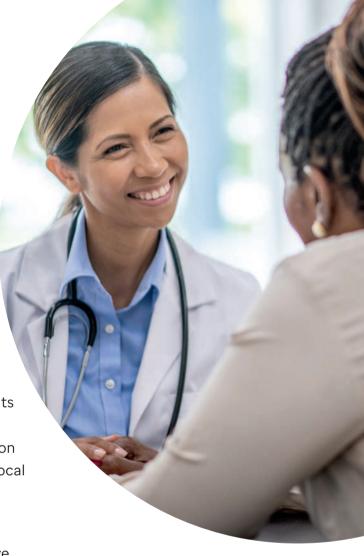
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- with experience
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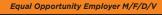
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Visit http://www.rockefeller.edu/facultysearch to submit your application online and view further information about the positions. Select Mechanisms of Human Disease and Cancer Biology as your field of study on the application form.

The Rockefeller University

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# Primary Care Physician Opportunity in our new Center for Black Health and Wellness.

If health equity is a priority in your career, Kaiser Permanente Northwest has an amazing Primary Care opportunity in our new Center for Black Health and Wellness. **Learn more about this opportunity - bit.ly/NWP\_blackcenterofexcellence** 

The Kaiser Permanente Center for Black Health and Wellness is equity in action. It's another important step in our commitment to equity, inclusion, and diversity—and I can't wait to see it come to life as soon as possible. I'm proud to be part of this effort and part of an organization where eliminating health care disparities is a high priority.

- Jane Akpamgbo, MD

Additional Primary Care Physicians, Urgent Care Physicians & Nocturnists Opportunities available

Portland and Salem, Oregon, and Southwest Washington, including Longview

#### Join our medical group

Northwest Permanente is a physician-led, multi-specialty group of 1,500 physicians, surgeons, clinicians, and administrative staff caring for 630,000 Kaiser Permanente members in Oregon and Southwest Washington.

We are an EOE/AA/M/F/D/V Employer

#### Working for Northwest Permanente, you'll enjoy:

• 21% employer contribution to retirement programs, including pension (this is not a match -NWP contributes 21% of clinician earnings to retirement programs regardless of employee contribution) NEJMCareerCenter.org

- 90%+ employer paid health plan
- Student loan assistance programs\*
- Relocation allowance
- Generous sign-on bonus\*
- Leadership opportunities
- Paid annual education leave + allowance
- Shareholder opportunities
- Paid sabbatical after attaining shareholder status
- for qualifying departments







Department of Defense is an equal opportunity employer



# **Physician Opportunities** in a Variety of Specialties

#### Northern and Central California

The Permanente Medical Group, Inc. (TPMG) is one of the largest medical groups in the nation with over 9,000 physicians, 22 medical centers, numerous clinics throughout Northern and Central California, and an over 75-year tradition of providing quality medical care.

#### **EXTRAORDINARY BENEFITS:**

- Competitive compensation and benefits package, including comprehensive vision, medical, and dental
- Interest Free Home Loan Program up to \$250,000 (approval required)
- Relocation Assistance up to \$10,000 (approval required)
- Malpractice and Tail Insurance
- Life Insurance
- Optional Long-Term Care Insurance
- Paid holidays, sick leave, and education leave
- Shareholder track
- Three retirement plans, including a pension plan

- · Work-life balance focused practice. including flexible schedules and unmatched practice support.
- · We can focus on providing excellent patient care without managing overhead and billing. No RVUs!
- We demonstrate our commitment to a culture of equity, inclusion, and diversity by hiring physicians that reflect and celebrate the diversity of people and cultures. We practice in an environment with patients at the center and deliver culturally responsive and compassionate care to our member populations.
- Multi-specialty collaboration with a mission-driven integrated health care delivery model.
- · An outstanding electronic medical record **system** that allows flexibility in patient management.
- We have a very rich and comprehensive Physician Health & Wellness Program.
- We are Physician-led and develop our own leaders.
- Professional development opportunities in teaching, research, mentorship, physician leadership, and community service.
- Ask us about our Forgivable Loan Program!

To learn more about these career opportunities and our wage ranges, please visit our website at northerncalifornia.permanente.org; forward your CV to: MDRecruitment.tpmg@kp.org; or call: 800-777-4912.



We're currently recruiting for a wide range of Physician specialties across Colorado, Utah, Montana, Nevada, Idaho, Kansas and Wyoming.

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- Perfect blend of rural communities and large metropolitan areas
- High quality of life
- Authentic western hospitality

Contact: Shawna Nuse | 937-962-2610 shawna.nuse@imail.org | PhysicianJobsIntermountain.org

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# CareerCenter









The Warren Alpert Medical School of Brown University, Rhode Island and The Miriam Hospitals, Providence, Rhode Island, seek applications for the position of Brown Director of Infectious Diseases. The successful candidate must qualify for a full-time medical faculty position at the rank of Associate Professor in the Department of Medicine at The Warren Alpert Medical School of Brown University

#### Minimum Requirements include:

- The applicant should hold an M.D. or D.O. degree from an LCME or equivalent-accredited medical school.
- The applicant must hold the rank of Professor or Associate Professor of Medicine in their current institution.
- The applicant must be board certified in Infectious Diseases.
- The applicant must maintain a role and/or engage in work of a national/ international impact in scholarly activity, teaching, or research in Infectious Diseases appropriate for a senior level position.
- The applicant must demonstrate a strong clinical background in the practice of Infectious Diseases
- The applicant must demonstrate excellence in patient care and

#### Highly Desirable qualifications include:

Experience in management and administration at a major medical

#### Preferred qualifications include:

• The applicant's research experience is complementary to existing clinical and laboratory resources and investigation at Brown

As EO/AA employers, Brown University and its affiliates provide equal opportunity and prohibit discrimination, harassment and retaliation based upon a person's race, color, religion, sex, age, national or ethnic origin, disability, veteran status, sexual orientation, gender identity, gender expression, or any other characteristic protected under applicable law, and caste, which is protected by our University policies. Review of applications will begin immediately and will continue until the position is filled or the search is closed.

Please apply online at <a href="http://apply.interfolio.com/128803">http://apply.interfolio.com/128803</a>.

**NEJMCaree** 

rCenter.org



## Internal Medicine

### Division: Hospital Medicine

The University of New Mexico, Health Sciences Center, Department of Internal Medicine, seeks exceptional faculty members to join a dedicated group of medical educators in the Division of Hospital Medicine. The position is open rank on the clinician educator track. Salary will be commensurate with experience and education.

Minimum Requirements: 1.) Must be board certified or eligible in Internal Medicine by date of hire.

Preferred Qualifications: 1.) Attended a US Medical school as a third and fourth year medical student OR served at least two years in a residency that provides education to US medical students during their core clerkship in internal medicine OR served on the faculty of a medical school, 2.) Experience/interest in hospital medicine, 3.) Experience/interest in medical education and quality improvement activities, 4.) Preference will be given to current and former New Mexico Residents, and 5.) A demonstrated commitment to diversity, equity, inclusion, and student success, as well as working with broadly diverse communities. Applicants will be required to obtain New Mexico licensure and be eliqible for DEA licensure and NM State Board of Pharmacy narcotics license. This position may be subject to a criminal records screening in accordance with New Mexico law.

#### Benefits of being an Academic Hospitalist at UNM include:

- > Faculty appointment within UNM School of Medicine
- > Overseeing upper level residents/APP's in their cross-cover and admitting roles
- ➤ Intensivists in house 24/7, limited procedural requirements for hospitalist
- > Option to pursue mixed model day and night roles
- > Opportunity to teach medical students and resident physicians in both pre-clinical and clinical years of training
- > Early opportunities for protected time for education, leadership and quality improvement
- > Competitive salary with extra pay for working on direct care services and at night

#### For complete description and application requirements for Posting Requisition 21106 please see the UNM jobs application system at: https://unmjobs.unm.edu The positions are open until filled.

Inquires may be directed to Dr. Deepti Rao, Professor, Division of Hospital Medicine, Department of Internal Medicine, University of New Mexico, MSC 10 5550, 1 University of New Mexico, Albuquerque, NM 87131, Attn: (Drao@salud.unm.edu).

UNM's confidential policy ("Disclosure of Information about Candidates for Employment," UNM Board of Regents' Policy Manual 6.7), which includes information about public disclosure of documents submitted by applicants, is located at http://policy.unm.edu/regents-policies/section-6/6-7.html

The University of New Mexico is an Equal Employment Opportunity/Affirmative Action Employer and Educator.

- All physician specialties
- Nationwide opportunities
- Earn what you're worth



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#### **North Shore Physicians Group**

North Shore Physicians Group (NSPG), a member of Mass General Brigham, is the largest multi-specialty physicians group north of Boston and a leader in innovative practices. We are explorers at heart. We are physicians who continually seek the best ways to streamline care—for both patients and providers. Our medical team of more than 450 physicians, nurse practitioners, physician assistants and other care professionals consistently work together to discover new ways to improve and enhance our practices to benefit the health of our patients and the careers of our providers. Join our team of explorers who are bringing the next evolution of quality care to the communities north of Boston. We have exceptionally rewarding careers for dedicated health professionals like you.

#### **Opportunities available:**

Cardiology Emergency Medicine Family Medicine Gastroenterology
Hospital Medicine
Internal Medicine
Obstetrics & Gynecology

Orthopedics – Hand Surgery Orthopedics – Spine Surgery Pediatric Emergency Medicine Psychiatry – Adult Psychiatry - Child & Adolescent Pulmonary/Critical Care & Sleep Medicine

#### About Our Community

Boston's North Shore, located only 15 miles north of Boston, is renowned for its natural beauty, handsome architecture, vivid historical significance and appealing neighborhoods. Communities on the North Shore range from popular seaports rich in sailing and coastal culture to rural towns offering working farms, horseback riding and golf courses. North Shore cities and towns are culturally diverse and unique with all the charm and romance of traditional New England. The North Shore of Boston is home to excellent public and private schools, beaches, restaurants, museums and welcoming neighborhoods.

WE'RE A BEACON OF NEW THINKING IN INTEGRATED MEDICINE. JOIN US.

To apply or learn more about our opportunities, email your CV and letter of interest to **Michele Gorham** at **nspgphysicianrecruiters@mgb.org**.



# Location, Location, Location



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Emerson Health has several opportunities for board-certified or board-eligible physicians to join several practices located throughout our service area. Emerson has employed as well as private practice opportunities.

At Emerson, you will find desirable practice locations, strong relationships with academic medical centers, superb quality of life, competitive financial packages, and more.

#### **Emerson Health Opportunities**

#### Cardiology

Potential Leadership

#### Urology

Potential Leadership

#### Hospitalist

Daytime, Nocturnist and Moonlighters

#### Orthopedics

#### **Primary Care**

Employed and Private Practice

#### **Psychiatrist**

# If you would like more information please contact:

Diane Forte Willis dfortewillis@emersonhosp.org phone: 978-287-3002 fax: 978-287-3600

#### About Concord, MA and Emerson Health



Our core mission is to deliver exceptional, patient-centered care that is highly reliable, safe, compassionate, equitable.

efficient and coordinated. While we provide most of the services that patients will ever need, the hospital's strong clinical collaborations with Boston's academic medical centers ensures our patients have access to world-class resources for more advanced care.

Located just 20 miles northwest of Boston in historic Concord, Massachusetts–known for its rich history, revolutionary war sites and many famous authors

Great place to raise children with top ranked public and private schools

Many recreational activities including hiking, biking, skiing and easy access to both the mountains and ocean



