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Physician Compensation Models Seeing Modest Shifts

Components are changing to accommodate the need for flexibility and the push toward value-based care

By Bonnie Darves

The COVID-19 pandemic has unleashed upon the entire health care sector the biggest challenges it's endured in decades, yet the effect of the massive disruption in care delivery, hospital volumes, and physician group revenues have had an almost negligible effect on physician compensation structures. During the early “lockdown” months, some physicians experienced temporary income declines, some were furloughed, and those in the surgical specialties were hard hit when surgery volumes took a nosedive. Overall, fortunately, compensation stabilized significantly in 2021, in large part because the market remains intensely competitive and demand for services high, and many organizations were able to access government assistance programs to meet payroll.

Halee Fischer-Wright, MD, president and CEO of the Medical Group Management Association, noted that the MGMA’s 2021 physician and provider compensation report found a modest 2.6 percent compensation increase for primary care physicians and a decrease of less than 1 percent for surgical specialties, despite the turmoil. “Practices acted quickly to leverage government programs … and adapted to new delivery models such as telemedicine, so they were able to ramp up quickly when patient volumes returned,” she said.

Experts expect, however, that physician groups and the large entities that employ doctors learned an important lesson during the pandemic: plan for the unexpected, starting now. As such, employers will likely adjust compensation models going forward to enable them more financial flexibility to respond to future uncertainty, even if the contracts that job-seeking physicians are presented today don’t look markedly different than they did two years ago.

“The pandemic’s effect on physician productivity and patient volumes may have been an anomaly, and organizations managed to adjust, but they’ve learned that they need to incorporate more flexibility in their physician compensation models going forward. What that means for physicians is that they’re likely to see more frequent compensation changes than in the past.”

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past," said Fred Horton, president of the AMGA Consulting, affiliated with the American Medical Group Association. That’s not necessarily a bad thing, Mr. Horton maintained, but it does mean that physicians need to be aware of and ask about factors that might trigger compensation-structure changes. “Physician should expect transparency in terms of how their compensation plans are structured and whether changes are planned,” Mr. Horton said.

Value and quality metrics making their way into contracts

Shifts in compensation structures are occurring, however, on an incremental basis, and both employed physicians and those seeking to make a career move are well advised to get at least a basic understanding of the changes. For example, the long-predicted move toward inserting quality payments and incentives, and even penalties for not meeting quality or performance metrics — regardless of whether those metrics are levied by government payers, commercial payers, or even the groups themselves — is taking hold. It’s only a matter of time, experts said, before quality-performance measures produce visible effects on physicians’ paychecks.

Andrew Hajde, CMPE, director of consulting at the MGMA, pointed to two big-picture developments that are starting to take hold in physician compensation structures: value-based care metrics that call for care efficiency, equitability, timeliness, and safety; and risk-based contracts, in which specified quality metrics are tracked and physicians (or their employers) are accountable for providing quality care while avoiding excess hospital readmissions or other suboptimal outcomes. “These movements, long in transit, are really picking up pace now, so we’re just starting to see these value-based components showing up in physician compensation models,” Mr. Hajde said. “Overwhelmingly, however, we’re still seeing primarily RVU-based models,” he explained, in which physicians are paid on and required to meet organization-established productivity standards and may see their incomes affected upward or downward accordingly.

Here’s how contract-set productivity expectations might transpire in practice to affect physicians’ income, according to Mr. Horton: Organizations are setting productivity parameters, so even physicians who are on salary-based compensation models might have a contract clause that states that their compensation level is contingent on their meeting work RVU (relative value unit) targets. “For example, for a physician who receives a $300,000 salary, the contract might state that their productivity can’t drop by more than 10 percent if they’re to retain that salary,” he said. “Similarly, physicians with lower salaries might see their compensation increase if they exceed the contract’s stated productivity expectation.”

Productivity incentives, primarily in the form of physicians’ work RVU performance, are likely to persist in part because they offer employers a legally sanctioned and relatively fair way to reward their higher-performing physicians, all sources interviewed for this article reported. Recent experience suggests that RVU-component compensation models, which a decade ago were predicted to have disappeared by now, are still very common. David Fontenot, president and co-founder of the Texas-based physician recruiting firm Adaptive Medical Partners, reported that in 95 percent of the searches his firm has conducted in the past two years for fully employed practice opportunities, approximately half have included an RVU-based incentive and 32 percent have included a quality-based incentive.

“The quality-based component has been steadily trending up over the last three to four years but transitioning from volume- to outcomes-based compensation is a delicate balancing act,” Mr. Fontenot said, in the persisting highly competitive physician-hiring market. “We almost never see traditional income guarantees anymore, though occasionally we’ll see employed-model offers with an option to shift to pure production compensation after a one- or two-year period,” he added. “What we are seeing, however, is hospital employers tinkering with hybrid structures — compensation models that blend quality incentives with work RVUs in an attempt to get closer to a value-based model,” he said.

Although competition for physicians remains a key factor in how compensation packages are structured, the changes that are occurring, if incrementally, suggest that employers and practices are still seeking that elusive “sweet spot” in incentivizing physician performance via compensation structures without risking burnout, according to Patrice Streicher, a former president of the National Association of Physician Recruiters who serves as operations manager for Vista Staffing. “The most significant change I’m seeing in compensation models now is that there’s more diversity than we’ve witnessed in the past 25 years. The primary driver of this diversity is trying to find the optimal model that supports and incentivizes value-based care — the focus on patient outcomes, visit experience, and re-admissions reduction — without negatively affecting productivity. And that’s challenging,” Ms. Streicher said.
At the same time, Ms. Streicher added, organizations are trying to create compensation models that also accommodate specific practice characteristics, such as location, specialty, and the prevailing physician practice culture, particularly regarding practice decision-making.

Other components, new models on the rise

An example of the experimentation that’s occurring as hiring organizations try to align cultural factors with financial realities, Ms. Streicher points out, is an emerging trend toward revenue collections-based components in compensation models. It’s an odd shift, she acknowledged, that hearkens to the early days of group-practice models in which partners simply divided total collections to pay themselves. But it’s possibly an appealing model to entrepreneurial physicians who want to play an integral role in how the business is run and profit from fiscal prudence and aren’t highly risk averse.

“We’re seeing models in which practices pay a salary initially but then shift the physicians to compensation based on a percentage of collections,” Ms. Streicher said. “In some cases, physicians who’ve transitioned to collections-based models are earning more than they did in volume- or productivity-based structures,” she said. While this is unlikely to become a prevailing model, it’s worth watching and it’s appealing to employers seeking to reduce their financial risk, she noted.

The other trend Ms. Streicher is seeing — one that may be due in part to the havoc the pandemic wreaked, when physicians saw that their stability was determined by their employers’ ability to withstand an economic crisis — is a move among some physicians to embrace permanent 1099 compensation structures. In these models, physicians are paid directly by the organization but are essentially self-employed independent contractors and therefore responsible for paying taxes, funding their benefits, and possibly even covering their malpractice insurance. This model, akin to locum tenens but with a few twists, offers inherent flexibility for physicians who want to manage their own practice lives and perhaps explore different locations.

“More doctors today are interested in becoming part of a ‘permanent pool’ of physicians while working as independent contractors,” Ms. Streicher said. This inherent-flexibility trend is also exhibited by the growing number of physicians seeking telemedicine opportunities that don’t require them to be fully place based. “A lot of physicians are requiring some or all telemedicine as part of their search now,” she added.

Another compensation model that’s gained ground in recent years, especially since the pandemic, is the direct-care model, in which physicians care for patients in employer-based clinics funded by large employers seeking more input into the care their employees receive. The appeal for physicians is that the model isn’t predicated on productivity thresholds and throughput but rather on wellness strategies and outcomes, according to Bob Bregant, president of Steel Healthcare Solutions in Overland Park, Kansas, and past president of the National Association of Physician Recruiters.

“I think physicians are attracted to direct care because they see fewer patients a day — 10 to 15, not 25 to 30 — and have a predictable Monday to Friday work week,” Mr. Bregant said. “Some physicians see direct care as a way to get off the productivity treadmill. About 95 percent of my recruiting recently has been for these opportunities.” In these models, primarily straight salary, the compensation structure is simple and bonus that accrues is based not on productivity but on patient satisfaction and chronic disease management and prevention.

In terms of traditional compensation components, some appear to be going away, notably rich education-loan-repayment offers and highly lucrative signing bonuses, several sources observed. While this was occurring to some extent before the pandemic, it’s becoming more prevalent now as hospitals try to adjust to the financial challenges the pandemic posed while reducing cash inducements and future payout commitments in a volatile revenue environment, Ms. Streicher noted.

Overall, Mr. Hadje added, hiring organizations are seeking ways to build in more flexibility in their compensation models, to protect themselves and their ability to weather financial downturns. “What we’ll see, I think, is physician employment contracts that include clauses permitting employers to adjust compensation models more frequently if or as needed,” Mr. Hadje said.

In Mr. Horton’s view, physician compensation models, especially the way that components are measured and weighted with the compensation formula, will continue to change more rapidly than in the past. “Organizations are still focused on getting the formula right, but at the same time they’re trying to incorporate more flexibility to respond to market conditions and more transparency overall,” he said.
Tips for evaluating compensation models’ components

Given the complexity of compensation structures and the changes afoot, it can be challenging to job-searching physicians to evaluate how a prospective employer’s compensation plan will affect their own bottom line. Here are some tips for navigating the current offer environment:

Ask the organization’s financial officer to explain how the model’s components will figure in an actual paycheck over a year or a few years, based on their physicians’ own experience. “You want to know how compensation has played out over time for other physicians in terms of bonus structures, RVU targets and thresholds, and quality incentives,” Ms. Streicher said. “And ask potential colleagues about how any inducements worked out — did they get what they were promised?”

Ask about the total-compensation picture — and expect a clear answer. Physician should find out what the model will translate into in total compensation, if they perform well and meet contract-set targets, Mr. Hajde advised. “Then take that total compensation figure and compare it to national compensation-survey findings for either new physicians or veteran ones, depending on your situation, in terms of the median and other percentiles. And don’t forget to take benefits value into account,” he said. He notes that contracts tend to fall in one of two models — physician employment agreements, which are like standard agreements, or physician services agreements, in which physicians are more like contractors than employees. Job-searching physicians should thoroughly understand the distinctions before they start looking, he added.

If there’s an income guarantee, find out what happens down the road. “Physicians should ask for concrete examples of how physicians’ compensation fared after the guarantee period ended — as in, what did it look like in year three, five, or even 10?” Mr. Horton advised.

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 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.

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 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 making 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.

THE CLINICAL PROBLEM

The incidence rate of a single unprovoked seizure among adults is 23 to 61 cases per 100,000 person-years.1 A seizure may substantially affect a person’s social interactions, employment, and driving eligibility. After a first unprovoked seizure, the overall risk of recurrence may be as high as 60% (Fig. S1 in the Supplementary Appendix, available with the full text of this article at NEJM.org), and this risk is highest within the first 2 years.2 Epilepsy affects 0.65% of adults worldwide,3 and this incidence is highest in developing countries. Epilepsy is diagnosed after two unprovoked seizures that occur more than 24 hours apart or after a single event that occurs in a person who is considered to have a high risk of recurrence (>60% risk in a 10-year period).4 Abnormal findings on electroencephalography (EEG), an abnormal neurologic status, and a second seizure all increase the probability of seizure recurrence.5 These three factors allow clinicians to stratify low, medium, and high risks (Table 1) and help in guiding decisions about the initiation of antiseizure medication.

Occasionally, serial seizures or status epilepticus will manifest as a first seizure, and these conditions may be life-threatening. The management of these conditions is described elsewhere.6

STRATEGIES AND EVIDENCE

DIAGNOSIS AND EVALUATION

Expert history taking is essential in the diagnosis of an epileptic seizure. Telephone an eyewitness is often invaluable, and home video recordings of patients with frequent seizures can help in the diagnosis. Table 2 summarizes the main differential diagnoses of a first generalized tonic–clonic seizure and provides information on the history taking, examination, and initial investigations. Careful
history taking can usually distinguish the three main causes of transient loss of consciousness: epileptic seizure (provoked or unprovoked), syncope (fainting, orthostatic, or cardiac), and psychogenic nonepileptic seizure (which mimics a seizure but is caused by psychological distress rather than abnormal electrical activity in the brain).

Provoked seizures might follow transient cerebrovascular insults such as alcohol withdrawal, the use of illicit drugs such as cocaine and methamphetamine, and metabolic disturbances (e.g., hypoglycemia or hyponatremia). They also may suggest a structural cause such as hemorrhagic stroke, encephalitis, venous sinus thrombosis, or tumor.

Seizures and epilepsy are classified according to seizure type (generalized, focal, or unknown), epilepsy type, and epilepsy syndrome. Table 3 and Figure S1 provide common examples of each.

The presentation of a seizure depends on its site of onset (generalized or focal) and pattern of spread. Seizures can occur at any age and in any situation. In some cases, a lack of warning suggests a generalized onset, although a lack of warning is also compatible with focal-onset seizures, especially in the frontal lobe. In other cases (usually focal-onset seizures), there is a specific but often “indescribable” aura — such as déjà vu, an epigastric “rising” sensation, or tastes or smells — usually followed by transient altered awareness.

A convulsive seizure typically has a tonic (stiffening) phase and then a clonic (convulsing) phase. Together these phases last 1 to 3 minutes, typically while the patient has open eyes, apnea, and cyanosis. Patients awaken many minutes later feeling tired and achy, and they sometimes have a lateral tongue bite.

Physical examination may reveal findings that point to a cause other than seizure or a condition predisposing to seizure. Attention should be paid to the skin (e.g., to detect facial angiofibromas, hypomelanotic macules suggestive of tuberous sclerosis, or scars from self-harm that are often associated with psychogenic nonepileptic seizures), the cardiovascular system (an aortic ejection murmur may indicate cardiac syncope, and postural blood-pressure changes may indicate orthostatic hypotension), and findings on funduscopic examination (e.g., elevated intraocular pressure).

Basic blood tests to measure levels of electrolytes, glucose, calcium, and magnesium may help to identify potential causes of seizure or coexisting conditions. An evaluation with 12-lead electrocardiography (ECG) is indicated in all patients (especially older adults) who have had a first seizure and unexplained blackout spell to look for evidence of previous myocardial infarction because of the risk of ventricular tachycardia or of rare but potentially fatal (and often familial) disorders, including hypertrophic cardiomyopathy and long QT syndromes.18

Brain Imaging
Urgent brain imaging is warranted in patients who present with a first epileptic seizure. Computed tomography is useful and widely available. However, in most adults with a first seizure (especially a focal-onset seizure) or early epilepsy, detailed magnetic resonance imaging (MRI; ideally 3-T MRI with <3-mm slice thickness on T2-weighted imaging and fluid-attenuated inversion recovery19) is warranted to identify subtle underlying causes such as hippocampal sclerosis, focal cortical dysplasia, or tumor that may be treated surgically.

Electroencephalography
Interictal EEG that is performed in a patient who has had a first seizure identifies more epileptiform activity than later EEG; one study paid to the skin (e.g., to detect facial angiofibromas, hypomelanotic macules suggestive of tuberous sclerosis, or scars from self-harm that are often associated with psychogenic nonepileptic seizures), the cardiovascular system (an aortic ejection murmur may indicate cardiac syncope, and postural blood-pressure changes may indicate orthostatic hypotension), and findings on funduscopic examination (e.g., elevated intraocular pressure).

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<table>
<thead>
<tr>
<th>Variable</th>
<th>Generalized Tonic–Clonic Seizure</th>
<th>Focal to Bilateral Tonic–Clonic Seizure</th>
<th>Reflex (Vasovagal) Syncope</th>
<th>Orthostatic Syncope</th>
<th>Cardiac Syncope</th>
<th>Psychogenic Nonepileptic Seizure</th>
<th>Panic Attack</th>
<th>Non-REM Parasomnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset and signs</td>
<td>Sudden onset; highly stereotyped: tonic (stiffening) phase, then clonic (convulsive) phase, together lasting 1–3 min, typically with eyes open, apraxia, and cyanosis.</td>
<td>Gradual or sudden onset; stereotypic aura or focal seizure may precede convulsion; in tonic phase, head and gaze deviation to the side contralateral to seizure focus, or &quot;sign-off&quot; (one arm extended, the other flexed).</td>
<td>Sudden onset; variable, although highly stereotypical within an individual patient (e.g., diaphoretic premonition, facial twitching, or symmetric tonic posturing with kicking and cycling).</td>
<td>Gradual onset; brief loss of consciousness (≤1 min), pallor, sometimes limb jerks and posturing.</td>
<td>Gradual onset; usually brief but occasionally prolonged loss of consciousness, pallor, limb jerks and posturing.</td>
<td>Gradual onset; often prolonged (≥2 min) with eyes closed, breathing and color maintained, rapid shaking (especially head and arms), back arching, fluctuating severity.</td>
<td>Gradual onset; variable duration, with eyes closed, breathing maintained or rapid, and color maintained.</td>
<td>Young, usually with onset in childhood and remissions in adolescence, often a family history of parasomnia.</td>
</tr>
<tr>
<td>Occurrence in specific situations</td>
<td>Usually occurs within 1 h after waking.</td>
<td>May occur at any time, including during sleep.</td>
<td>Commonly situational (e.g., may occur in bathroom or restaurant) and often provoked (e.g., while standing, with the sight of blood, after excretion).</td>
<td>May occur with standing after lying down.</td>
<td>Rarely situational, occasionally occurs during exertion.</td>
<td>Commonly situational, especially when patient is awake and not alone, often occurs with stressful situations, but patient may report no trigger.</td>
<td>Commonly occurs during stressful situations.</td>
<td>Always occurs during sleep, especially during first third of the night; worsen with sleep, alcohol, and stress.</td>
</tr>
<tr>
<td>Warning prodrome</td>
<td>Uncommon</td>
<td>Common, occurs with preceding minor seizure (aura).</td>
<td>None; occurs when patient is asleep.</td>
<td>Common, preceding nausea is strongly suggestive; occurs in hot environment, with light-headedness, visual blackout, or both.</td>
<td>Uncommon</td>
<td>Common, occurs with fear, panic, and altered mental state, or patient may report no warning.</td>
<td>Almost invariably occurs with fear, panic, and altered mental state.</td>
<td>None; occurs when patient is asleep.</td>
</tr>
<tr>
<td>Consciousness and responsiveness</td>
<td>Not during episode.</td>
<td>Partial during warning (aura) but not during episode.</td>
<td>May be at least partially retained.</td>
<td>Not during episode.</td>
<td>Not during episode.</td>
<td>Not during episode.</td>
<td>Variable, even within episode, stimulants can terminate episode.</td>
<td>Variable, patient may be responsive.</td>
</tr>
<tr>
<td>Incontinence</td>
<td>Common</td>
<td>Common</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Rare</td>
</tr>
<tr>
<td>Recovery</td>
<td>Slow; patient is drowsy, confused, and has muscular aches.</td>
<td>Slow; patient is drowsy, confused, and has muscle aches.</td>
<td>Rapid</td>
<td>Rapid regaining of consciousness, but patient often fatigued.</td>
<td>Often rapid, unless patient remains in upright position during episode.</td>
<td>Often rapid</td>
<td>Usually rapid</td>
<td>Patient typically returns to sleep.</td>
</tr>
</tbody>
</table>

### Notes:
- **Typical demographic characteristics**
  - Young (<25 yr), often no seizure history reported (although on direct questioning, patient may describe altercations, mydriasis, photopsia, or all these symptoms.)

### Table 2.
**Differential Diagnosis of Generalized Tonic–Clonic Seizure in Adults**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Generalized Tonic–Clonic Seizure</th>
<th>Focal to Bilateral Tonic–Clonic Seizure</th>
<th>Reflex (Vasovagal) Syncope</th>
<th>Orthostatic Syncope</th>
<th>Cardiac Syncope</th>
<th>Psychogenic Nonepileptic Seizure</th>
<th>Panic Attack</th>
<th>Non-REM Parasomnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occurrence in specific situations</td>
<td>Usually occurs within 1 h after waking.</td>
<td>May occur at any time, including during sleep.</td>
<td>Commonly situational (e.g., may occur in bathroom or restaurant) and often provoked (e.g., while standing, with the sight of blood, after excretion).</td>
<td>May occur with standing after lying down.</td>
<td>Rarely situational, occasionally occurs during exertion.</td>
<td>Commonly situational, especially when patient is awake and not alone, often occurs with stressful situations, but patient may report no trigger.</td>
<td>Commonly occurs during stressful situations.</td>
<td>Always occurs during sleep, especially during first third of the night; worsen with sleep, alcohol, and stress.</td>
</tr>
<tr>
<td>Warning prodrome</td>
<td>Uncommon</td>
<td>Common, occurs with preceding minor seizure (aura).</td>
<td>None; occurs when patient is asleep.</td>
<td>Common, preceding nausea is strongly suggestive; occurs in hot environment, with light-headedness, visual blackout, or both.</td>
<td>Uncommon</td>
<td>Common, occurs with fear, panic, and altered mental state, or patient may report no warning.</td>
<td>Almost invariably occurs with fear, panic, and altered mental state.</td>
<td>None; occurs when patient is asleep.</td>
</tr>
<tr>
<td>Onset and signs</td>
<td>Sudden onset; highly stereotypical: tonic (stiffening) phase, then clonic (convulsive) phase, together lasting 1–3 min, typically with eyes open, apnoea, and cyanosis.</td>
<td>Gradual or sudden onset; stereotypic aura or focal seizure may precede convulsion; in tonic phase, head and gaze deviation to the side contralateral to seizure focus, or &quot;sign-off&quot; (one arm extended, the other flexed and altered mental state).</td>
<td>Sudden onset; variable, although highly stereotypical within an individual patient (e.g., diaphoretic premonition, facial twitching, or symmetric tonic posturing with kicking and cycling).</td>
<td>Gradual onset; brief loss of consciousness (≤1 min), pallor, sometimes limb jerks and posturing.</td>
<td>Gradual onset; usually brief but occasionally prolonged loss of consciousness, pallor, limb jerks and posturing.</td>
<td>Gradual onset; often prolonged (≥2 min) with eyes closed, breathing and color maintained, rapid shaking (especially head and arms), back arching, fluctuating severity.</td>
<td>Gradual onset; variable duration, with eyes closed, breathing maintained or rapid, and color maintained.</td>
<td>Young, usually with onset in childhood and remissions in adolescence, often a family history of parasomnia.</td>
</tr>
<tr>
<td>Consciousness and responsiveness</td>
<td>Not during episode.</td>
<td>Partial during warning (aura) but not during episode.</td>
<td>May be at least partially retained.</td>
<td>Not during episode.</td>
<td>Not during episode.</td>
<td>Not during episode.</td>
<td>Variable, even within episode, stimulants can terminate episode.</td>
<td>Variable, patient may be responsive.</td>
</tr>
<tr>
<td>Incontinence</td>
<td>Common</td>
<td>Common</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Rare</td>
</tr>
<tr>
<td>Recovery</td>
<td>Slow; patient is drowsy, confused, and has muscular aches.</td>
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</table>
lower in the first 2 years after the first seizure among patients who received immediate initiation of medication (generally carbamazepine or sodium valproate) than among those who received delayed treatment pending a second seizure (32% vs. 39%), but earlier initiation of treatment did not affect longer-term seizure remission. Adverse events were significantly more common with immediate treatment than with delayed treatment (in 39% and 31% of the patients), and quality-of-life measures were similar in the two groups. Therefore, clinicians usually advise withholding medication in patients who have had a single seizure unless the recurrence risk is particularly high. Despite a low estimated risk of recurrence, some patients choose to receive medication because they have had a particularly severe or injurious first seizure or because they live in areas such as the United Kingdom where a second seizure might extend the driving restriction from 6 months to 12 months.

**FACTORS GUIDING MEDICATION CHOICE**

The choice of medication should be guided by the type of seizure and epilepsy syndrome (broadly, valproate or levetiracetam is used in patients with generalized-onset seizures and lamotrigine or levetiracetam is used in those with focal-onset seizures) as well as by the effectiveness, adverse-event profile, and pharmacodynamic and pharmacokinetic properties of a given drug. Coexisting conditions must also be considered. For example,
Table 4. First-Line Antiseizure Medications.

<table>
<thead>
<tr>
<th>Medication and Class</th>
<th>Indication</th>
<th>Dose in Adults</th>
<th>Adverse Effects</th>
<th>Interactions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium valproate</td>
<td>Partial-onset seizures, primary generalized seizures, tonic-clonic seizures</td>
<td>Start 250 mg daily; increase in 250-mg doses every 2–3 days to 500–1000 mg daily divided into 2–4 doses</td>
<td>Dose-related effects: drowsiness, aggression, failure to thrive, weight gain, polycystic ovaries, mental delay identifiable in up to 3.5% of patients</td>
<td>Effect on other agents: Increases embryonic luteinizing hormone, decreases progesterone; protein-bound; not metabolized in liver or kidney</td>
<td>Highly effective for generalized seizures; early evidence of teratogenicity: dose-dependent concentration and neurodevelopmental defect not supported by subsequent studies; limits its use in young women; increases plasma enzyme-inducing medications lower total valproate concentration, and increase free valproate; teratogenicity: dose-dependent evidence of contraceptives (e.g., warfarin); data support good safety profile in pregnancy (early concern regarding increased risk of nonverbal ability; these effects were not observed in children with in utero exposure to valproate; cleft lip; gastrointestinal, renal, and neural-tube defects; and polydactyly. Cognitive assessments in 6-year-old children who had had in utero exposure to valproate showed significant dose-related inverse associations with IQ, verbal ability, and nonverbal ability; these effects were not observed in children with in utero exposure to other antiseizure medications. Thus, valproate should generally be avoided in women of childbearing potential; if valproate is used, effective measures should be taken to prevent pregnancy unless the woman is fully informed about the risks. As part of a licensing requirement since 2018 in the United Kingdom and the European Union, women who receive valproate must use highly reliable contraception (a hormonal implant or an intrauterine device) or undergo monthly pregnancy tests, and they must sign an annual risk-acknowledgment form.</td>
</tr>
<tr>
<td>Levetiracetam (Keppra)</td>
<td>Generalized seizures, tonic-clonic seizures, myoclonic seizures</td>
<td>Start 200–300 mg daily, increase in 200-mg doses every 3–4 days up to 600–1500 mg daily; divided into 2–4 doses</td>
<td>Dose-related effect: dizziness, nystagmus, headache, diplopia; sometimes severe in children</td>
<td>Effect on other agents: Increases plasma concentration of other medications (e.g., carbamazepine, lamotrigine, enzyme-inducing medications lower total valproate concentration, and increase free valproate)</td>
<td>Effective for focal-onset seizures in women with some mitochondrial diseases (liver failure may occur in patients with POLG1 mutations)</td>
</tr>
<tr>
<td>Lamotrigine (Lamictal)</td>
<td>Partial-onset seizures, primary generalized seizures, tonic-clonic seizures, generalized absence seizures, myoclonic seizures</td>
<td>Initial maintenance, 25–100 mg daily; increase in 25–50 mg increments every 1–2 weeks up to 100–200 mg daily</td>
<td>Dose-related effects: rash, Stevens–Johnson syndrome, erythema multiforme, neutropenia, agranulocytosis; liver failure especially when taken with drugs that induce CYP3A4</td>
<td>Effect on other agents: Increases plasma concentration of other medications (e.g., rifampin)</td>
<td>Effective for partial-onset seizures; increases enzyme-inducing medications lower total valproate concentration, and increase free valproate; teratogenicity: dose-dependent evidence of contraceptives (e.g., warfarin); data support good safety profile in pregnancy</td>
</tr>
</tbody>
</table>

Approximately 10% of babies exposed to sodium valproate in utero have major congenital anomalies, and neurodevelopmental delay remains unclear. The EURAP study also showed that major congenital malformations associated with valproate were dose-related and included cardiac defects and hypospadias, each of which was found in 2% of infants with exposure to valproate; cleft lip, gastrointestinal, renal, and neural-tube defects; and polydactyly. Cognitive assessments in 6-year-old children who had had in utero exposure to valproate showed significant dose-related inverse associations with IQ, verbal ability, and nonverbal ability; these effects were not observed in children with in utero exposure to other antiseizure medications. Thus, valproate should generally be avoided in women of childbearing potential; if valproate is used, effective measures should be taken to prevent pregnancy unless the woman is fully informed about the risks. As part of a licensing requirement since 2018 in the United Kingdom and the European Union, women who receive valproate must use highly reliable contraception (a hormonal implant or an intrauterine device) or undergo monthly pregnancy tests, and they must sign an annual risk-acknowledgment form.
Data from pregnancy registries have shown no consistent safety signals for lamotrigine or levetiracetam and no clear evidence of neurodevelopmental delay associated with these agents. In observational studies, maternal folic acid supplementa-
tion has been associated with a reduced risk of neurocognitive abnormalities among ba-
bies with in utero exposure to antiseizure medica-
tions; and such supplements are routinely recommended in women who may become pregnant while receiving such medication.

**Effectiveness of Medications**

A single-center observational study involving 525 patients with epilepsy of various types showed that approximately half became seizure-free for at least 1 year after they began to receive a first antiseizure medication. Many randomized, con-
trolled trials of the efficacy of new antiseizure medications have assessed their use as add-on medications in patients with treatment-resistant epilepsy. In these short-term trials, these new medications reduced the frequency of seizures 2 to 4 times more than placebo but often at doses that were higher than those generally used in practice.

The management of epilepsy, which is a long-
term condition, is largely informed by the Stan-
dard and New Antiepileptic Drugs (SANAD) trial, which involved long-term, head-to-head, unblinded comparisons of existing standard agents with newer medications. The first SANAD trial involving patients with generalized and un-
classified epilepsy compared valproate with the standard of care with lamotrigine or topira-
mate and showed the superiority of valproate over topiramate with respect to treatment failure and the superiority over lamotrigine with respect to 12-month remission. For focal epilepsies, lamotrigine was superior to carbamazepine (then the standard of care), gabapentin, and topiramate with respect to treatment failure and was generally less restrictive than carbamazepine with respect to 12-month remission. More recently, the SANAD II trial involving patients with generalized and unclassified epilepsies did not show nonsuperiority of levetiracetam to carbamazepine with respect to 12-month remission; valproate resulted in a higher incidence of 12-month remission (36% vs. 26%) and a similar incidence of adverse events, and it was more cost-effective.

For focal epilepsies, zonisamide but not levetiracetam was non-
inferior to lamotrigine with respect to 12-month remission; however, as compared with both leve-
tiracetam and zonisamide, lamotrigine resulted in lower incidences of treatment failure and ad-
verse events, and it was more cost-effective.

Thus, the first-line medication for patients with generalized-onset seizures is sodium val-
proate, or levetiracetam for girls and women of childbearing potential. For patients with focal-onset seizures, lamotrigine is usually the first-
line medication, although levetiracetam or other agents may have advantages in some patients (Table 4 and Fig. 5).

The main disadvantage of lamotrigine is its slow starting dose, with increases to the full treatment dose over a period of several weeks. This gradual dose adjustment is necessary to re-
duce the risk of the Stevens–Johnson syndrome. Initial coverage with another antiseizure medication may be war-
ranted. The main adverse effects of levetiracetam are irritability and anxiety, especially in patients with preexisting anxiety.

**Lifestyle Factors**

Clinicians should engage in joint decision mak-
ing with patients and share verbal and written information. Information on driving eligibility is particularly important. In the United Kingdom and the European Union, a 6-month driving re-
striction is mandated for patients who have had a single seizure with a low risk of recurrence, compared with valproate-sensitive pa-
tients with epilepsy, including those who have had a single seizure and who have a high risk of recurrence (e.g., those with an abnormal EEG, neurologic deficit, or both). In the United States, eligibility for a driver’s license in persons who have had a single seizure or in those with epilepsy varies among states, although the rules are generally less restrictive than those in Europe. Advice from clinicians regarding whether to drive after a single seizure is important. Clinicians should inform patients of the risks associated with seizures, including drowning and SUDEP, the likelihood of seizure recurrence (Table 1); and suggested lifestyle modifications (e.g., avoid-
ing being alone during certain activities such as caring for children or bathing, so that another person can help if a seizure occurs, and appreci-
ating the risks of ladders and heights).

Patients should be encouraged to adhere to the regimen of antiseizure medication and a regular sleep schedule and to limit the use of alcohol. Considerable observational data provide support for a relationship between insufficient sleep and seizure risk or abnormal EEG activ-
ity. A short-term randomized trial involving 84 patients with medication-resistant focal epi-
lepsy in whom the dose of antiseizure medica-
tion was being tapered showed no significant differences in seizure frequency between the group of patients with sleep deprivation and the control group. However, these trial findings may not be applicable to patients with early epilepsy, and the promotion of sleep hygiene in patients with epilepsy remains prudent. Alcohol use is an important seizure precipitant, mainly because of the risk of seizure during alcohol withdrawal and the tendency of alcohol to disrupt sleep, interfere with adherence to antiseizure medica-
tions, or both. A meta-analysis of observational studies showed a dose–response relationship be-
tween the amount of alcohol consumed daily and the frequency of seizures in patients with treatment-resistant epilepsy.

**Areas of Uncertainty**

The clinical diagnosis of epilepsy may be incor-
rect in up to 20% of patients unless episodes are captured on EEG with video. Many patients with preexisting anxiety regard this as an important reason to have psychogenic seizures, and additional psychogenic seizures may later develop in pa-
ients with established epilepsy. Clinicians must repeatedly question the diagnosis in patients with medication-resistant epilepsy.

The potential long-term effects of new anti-
seizure medications, which are typically pre-
scribed as lifelong treatments, warrant further study. Notoriously, for 8 years after licensing, vigabatrin was used worldwide to manage sei-
zures until it was recognized that long-term use of this agent caused permanent visual-field defects in more than half of patients. Data are lacking to inform pregnancy and offspring out-
comes associated with new antiseizure medica-
tions; several worldwide pregnancy registries regularly update clinicians on the teratogenicity of these agents (Table 3).

Genetic characterization has enabled both targeting of more effective treatments for some complex epilepsies (e.g., stiripentol for the Dra-
vet syndrome) and a ketogenic diet for glucose transporter type 1 deficiency syndrome and screening for the HLA-B1502 allele in Han Chi-
nese populations to predict the carbamazepine-
induced Stevens–Johnson syndrome. Further understanding of the effect of genetic markers on the risk of recurrent seizures and on the efficacy and risks of various medications is needed to guide treatment decisions.

**Guidelines**

In 2015, the American Academy of Neurology and the American Epilepsy Society provided joint guidelines on the management of unprovoked first seizure in adults. The 2012 guidelines of the National Institute for Health and Care Excellence in the United Kingdom are undergoing revision. The current recommendations differ from these older guidelines with respect to spe-
cific medications recommended, since the re-
sults of the SANAD II trial were published after these guidelines were issued.

**Conclusions and Recommendations**

In the patient described in the vignette, the first generalized tonic–clonic seizure developed after sleep loss and alcohol use. Careful questioning of the patient revealed that this was an isolated event, and the patient was thought to have psychogenic seizures, and additional psychogenic seizures may later develop in pa-
ients with established epilepsy. Clinicians must repeatedly question the diagnosis in patients with medication-resistant epilepsy.

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nese populations to predict the carbamazepine-
induced Stevens–Johnson syndrome. Further understanding of the effect of genetic markers on the risk of recurrent seizures and on the efficacy and risks of various medications is needed to guide treatment decisions.
however, if ictal EEG showed spike-and-wave activity, indicating a high risk of recurrent seizure, I would recommend initiation of an antiseizure medication. Provided that this patient did not have depression or anxiety, I would favor levetiracetam administered with a folate supplement since the patient is of childbearing potential. I would arrange follow-up in 2 months to review the patient’s response and adherence to the medication regimen and any adverse effects.

No potential conflict of interest relevant to this article was reported.

Declaration forms provided by the authors are available in full with this article at NEJM.org.

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\end{align*}
\]

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\[
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&\text{Lifetime Board Certified} \\
&$323,892 - $340,104 \\
&\text{Pre-Board Certified} \\
&$306,876 - $322,236
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For more information, contact Debora Kim (877) 793-4473, CentralizedHiringUnit@cdcr.ca.gov or www.cchcs.ca.gov.
primary care physician
Dutchess County, New York

Northern Medical Group is a Multispecialty group that was formed by combining Community Primary Care, Digestive Disease Center and Northern Heart Specialties, under one group. We are continuously growing and looking for the right candidate to join our team in Internal Medicine.

We are looking for Medical Doctors, or Doctors of Osteopathy who possess not only the relevant skills and growth potential, but positive attitudes, flexibility, and creative minds to join our expanding team. We offer a competitive salary and incentive bonus as well as a great benefits package.

We are located in the beautiful and picturesque Hudson Valley, surrounded by many historical landmarks along the Hudson River. The surrounding counties offer you many amazing opportunities to enjoy the great outdoors with scenic walkways, hiking and biking trails and various amenities to welcome you and your families to this area.

We offer you a productive and positive team-based environment, a collaborative approach to delivering high-quality relationship-centered care and opportunities to provide feedback and contribute to innovation across NMG.

We are looking for a Graduate of Accredited medical school with a degree of Doctor of Medicine (MD), or Doctor of Osteopathy (DO); completion of Accredited Residency, Board certification in specialty (if newly graduated from residency, must be obtained within 3 years of graduation) must be kept current, unrestricted license to practice within New York and a current DEA certificate without restriction.

We look for the following qualities in an individual:

- Empathetic: To all members of the care team, regardless of role.
- Good listener: Ability to use insight and empathy to communicate with patients and team members.
- Humble: Appreciating the diverse perspectives that come from cross-disciplinary team members.
- Reliable: Following through on commitments.
- Passionate & Curious: Approaching challenges with an open mind and a sense of optimism and curiosity.
- Flexible: Able to embrace change and adapt to a rapidly evolving healthcare environment.

If you would like to learn more about this opportunity please contact Kristin De Witt:
kdewitt@northernmed.com

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PHYSICIAN CAREERS AT
The US Oncology Network

The US Oncology Network brings the expertise of nearly 1,000 oncologists to fight for approximately 750,000 cancer patients each year. Delivering cutting-edge technology and advanced, evidence-based care to communities across the nation, we believe that together is a better way to fight.

toxoncology.com

To learn more about physician jobs, email physicianrecruiting@usoncology.com

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ChristianaCare, headquartered in Wilmington, Delaware is a nationally recognized leader in healthcare. We are actively recruiting physicians for specialties across our health system.

Why ChristianaCare?
- Featured in Newsweek’s Top 50 Most Influential Clinical Executives in 2021
- Named among Forbes Best Employer for Diversity & Inclusion in The U.S. For 2021
- Achieved Healthgrades America’s 50 Best Hospitals Award In 2021
- Non-for-profit teaching health system with more than 290 residents and fellows
- Unique, data-powered care coordination sensors and a focus on population health and value-based care. ChristianaCare is shaping the future of health care.

Delaware has something for everyone, diversity of cultures, Westside, entertainment venues and retail experiences along with a temperate climate.

Our location checks off all the boxes including:
- Central location between New York City and Washington DC in the I-95 corridor
- Excellent educational options, home to several nationally known universities
- Reasonable cost of living: no sales tax in DE
- Picturesque parklands, recreational areas, national parks, and beach resorts

For more details, please visit https://careers.christianacare.org/Physicians

We are seeking physicians in the following specialties:

- Primary Care – Clinical Teaching and/or Ambulatory responsibilities
- Cardiology – Advanced Heart Failure
- Dermatology
- Endocrinology & Metabolism
- Hospitalist
- Neurology
- Nephrology
- Plastic Surgery
- Pulmonology
- Radiation Oncology
- Rheumatology
- Radiology, Breast Imaging, Body Imaging, Neuroradiology
- Cardiovascular and Cardiothoracic
- Critical Care Medicine
- Urology
- Urology
- Vascular Neurology
- Vascular Surgery
- Weight Management
- Women’s Health

Your skills are in demand at many health systems. But only Optum offers you the right care culture in which to flourish. To collaborate and share your expertise, to give patients the attention they deserve. To leverage the latest treatment advances, information technologies and analytics to push the boundaries of medicine, join us now there’s only one thing to do — your life’s best work.

Current opportunities include Site Chief and Staff Physicians in Primary Care.
Join our team!
We are expanding services to meet the demands of our growing community:
● Physician led organization – where you will have a voice!
● Location in the heart of New England – just north of Boston, near New Hampshire seacoast.
● Excellent salary and benefits.
● Professional growth to include generous CME dollars.

We have both the physician and APC openings:
● Neuroradiology
● OB/GYN
● Breast Surgeon
● Palliative Care
● Hospitalist
● Infectious Disease
● General Surgery Call Coverage
● Primary Care
● Both Family & Internal Medicine

For more information contact:
Physician and Provider Recruitment
Phone: (603) 580-7131
Email: ProviderRecruitment@ehr.org

866.694.7866

Join our team! Whether you are beginning your career or exploring leadership opportunities, TeamHealth can help you navigate the next step of your professional journey. We offer the tools and resources that allow you to maintain a healthy work-life balance. Whether you are a new graduate or experienced provider, TeamHealth can help you embark on your professional journey.

Kelsey-Seybold Clinic
HOUSTON’S LEADER IN PATIENT CARE

Kelsey-Seybold Clinic, Houston’s fixed private multispecialty physician group, is a leading innovator in preventative medicine and ambulatory services, encompassing some 15 different specialties and sub-specialties founded in 1949 by Dr. Mavis Kelsey in the world-renowned Texas Medical Center.

A Houston tradition in patient-centered care, Kelsey-Seybold Clinic is a physician-led, multispecialty clinic with over 25 locations and comprised of more than 500 physicians providing primary and specialty care in a collaborative manner. We treat more than 500,000 patients utilizing innovative technology and teamwork, including members of managed care plans and employer groups.

Physician - Hematology/Oncology

We are currently seeking a BC/BE physician interested in practicing general hematology/oncology to join our comprehensive and QOPI certified cancer center. Practice the whole breadth of medical oncology and malignant/benign hematology with a physician group of greater than 8 at our campus in The Woodlands/Spring northwest of Houston. Call will be 1 in 8 weeks.

Qualifications include:
- Graduate of an approved training program in the United States.
- Board-certified or eligible.
- Licensed or willing to be licensed in the State of Texas.

For more details on our defined Pathway to Partnership, benefits, compensation, and clinic locations visit www.kelsey-seyboldproviders.com

Kelsey-Seybold Clinic is an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, or protected veterans status. Kelsey-Seybold is a VEVRAA Federal Contractor and desires priority referrals of protected veterans.

Specialty Physicians of Illinois, LLC

PRIMARY AND SPECIALTY CARE OPPORTUNITIES ARE AVAILABLE IN SOUTH SUBURBAN CHICAGO

Specialty Physicians of Illinois, LLC has assembled an unmatched team of accomplished physicians to provide comprehensive healthcare services to patients of all ages across a broad spectrum of specialties and disciplines. The south and southwest suburbs now have a physician group comprised of physicians that have developed experience and expertise in specific specialties.

In addition to developing clinical expertise in their specialties, Specialty Physicians of Illinois, LLC physicians strongly embrace the philosophy that comfort, compassion, and patient satisfaction are key elements of quality care. So, we take our time. We listen. We counsel. We personally attend to our patients through the entirety of their care. New graduates and experienced providers who share our mission of quality, compassionate care and outstanding customer service are encouraged to apply.

Contact us for more information about our current opportunities:
(844) 375-8227
practice@franciscanalliance.org

NEJM Career Center

Internal Medicine Physician
Chester/Hackettstown, NJ

We are currently recruiting a full-time Internal Medicine physician at Plaza Family Care, P.C. located in Chester/Hackettstown, New Jersey.

At Plaza Family Care, we offer a friendly work environment and a strong infrastructure, including an EMR and professionally managed staff. You will work with a dedicated staff committed to providing a diverse patient population with excellent, high-quality care.

Enjoy a 5-day work week with outpatient care and a manageable call schedule.

Schedule:
- Full-Time, 5-day week.
- Requires one evening with 1 out of 3½ day Saturday

Responsibilities:
- Board Certified Internal Medicine M.D. or D.O.
- EMR: Greenway
- No hospital rounding
- Compassionate, professional and approachable
- Office hours in two office locations

Compensation:
- Permanent, W-2 position
- Competitive annual salary with RVU bonus incentive
- Benefits include full medical, dental/vison, 401K.
- Malpractice coverage, CME support and FTO
- Paid NJ licensing, CDS, DEA
- Sign on bonus available
- Job Type: Full-time

Please forward C.V. to juscilla@pfcm.com

NEJM Career Center
Clearwater Cardiovascular Consultants (CCC) is seeking a BC/BE Coronary/IV Interventional cardiologist who has a passion for patient care, excellent clinical skills and fellowship training in peripheral vascular interventions. The position will enjoy coronary interventional and peripheral vascular opportunities in our participating hospitals as well as our practice owned ASC and OBL. Research participation is also available.

We are the premier private practice cardio group in the Tampa Bay Area, serving our community for over 45 years. CCC has three large, fully equipped offices with state-of-the-art equipment and excellent support staff! We have a strong group culture, solid family values and enjoy significant leadership positions at our outstanding hospitals. Our central office includes a practice owned dedicated cardiovascular CT lab, a dedicated outpatient cath lab and a cardiovascular ASC. We offer a competitive salary, a full benefits package and the opportunity to become a shareholder in the group after three years.

Clearwater is a beautiful city on Florida’s Gulf Coast, with year-round recreation weather and one of the nation’s best beaches. It has a diverse economy and is conveniently located in Pinellas County, part of the Tampa Bay Area. The Tampa Bay is home to the Tampa Bay Buccaneers (NHL, Tampa Bay Rays (MLB), Tampa Bay Lightning (NHL), several MLB spring training sites, performing arts, outdoor activities and many great restaurants.

Visit our website at www.cccheart.com and send your CV to:

simmonscc@uccheart.com
New York Cancer and Blood Specialists, a prominent and respected hematology/oncology group, is seeking medical professionals to join its well-established and growing pure sub-specialty practice with academic affiliation. Practice manages a freestanding outpatient 2-day/week cancer center with extensive chemotherapy administration, radiation oncology and research department.

We currently have excellent opportunities the following positions throughout New Jersey, New York City, Suffolk County & Nassau County:

- **Oncology Fellows**  
- **Oncologist/Hematologists**  
- **Urologists**  
- **Radiation Oncologists**

We offer a competitive salary and benefits.

**Please email or send C.V. to:**

Robert Nicoletti, Chief Human Resources Officer
Email: rnicolletti@nycancer.com

New York Cancer and Blood Specialists
1500 Route 112, Building 4 – First Floor, Port Jefferson Station, NY 11776

Visit us at nycancer.com and like us on Facebook

An EOE m/f/d/v
Oncologists/Hematologists
Southern California
Antelope Valley Cancer Center, located in Palmdale, Southern California is seeking 2 M.D./D.O BC/BE Hematology / Oncology Physicians. Join our 4-doctor team in a well-established comprehensive cancer center which has on-site Radiation Oncology and an infusion suite and an EMR in place. Competitive salary, performance based RVU and bonus, signing bonus and relocation allowance, partnership / succession plan with full benefits package. Sponsorship opportunities for J1/H1b/GC. Send CV via email to: drram40@gmail.com

Emerson Hospital Opportunities

Location, Location, Location

Emerson Hospital. org

TOP REASONS TO CHOOSE THE INTERMOUNTAIN WEST:
World-Class Skiing, Hiking, and Biking • Incredible National Parks
• COMPETITIVE SALARY • UNLESS OTHERWISE SPECIFIED, VISA SPONSORSHIP NOT AVAILABLE
• EMPLOYMENT WITH INTERMOUNTAIN HEALTHCARE • RELIATION ASSISTANCE, UP TO 15K
• FULL BENEFITS THAT INCLUDE MEDICAL, DENTAL, VISION, 401K MATCH & MORE
• COMPETITIVE SALARY • UNLESS OTHERWISE SPECIFIED, VISA SPONSORSHIP NOT AVAILABLE

Emerson Hospital has several opportunities for board-certified or board-eligible physicians to join several practices in the Emerson Hospital service area. Emerson has employed as well as private practice opportunities with both new and existing practices.

Emerson Hospital Opportunities
• Anesthesiologist
• Cardiology
• Certified Registered Nurse Anesthetists
• Foot and Ankle Orthopedic Surgeon
• Hospitalist – Director of Clinical Operation and Attending Hospitalist
• Neurology
• Primary Care
• Urgent Care

If you would like more information please contact:
Diane Forte Willis
dfortewillis@emersonhosp.org
phone: 978-287-3002
fax: 978-287-3600

About Emerson Hospital
Located in Concord, Massachusetts Emerson is a 179-bed community hospital with satellite facilities in Westford, Groton and Sudbury. The hospital provides advanced medical services to over 300,000 individuals in over 25 towns.

Emerson has strategic alliances with Massachusetts General Hospital, Brigham and Women’s and Tufts Medical Center.

Concord area is rich in history, recreation, education and the arts and is located 20 miles west of downtown Boston.

Physician Opportunities

Baystate Health (BH) is Western Massachusetts’s premier healthcare provider and home to the University of Massachusetts Medical School – Baystate.

At Baystate Health we know that treating one another with dignity and equity is what elevates respect for our patients and staff. It makes us not just an organization, but also a community where you belong. It is how we advance the care and enhance the lives of all people.

Baystate Health
dottorew@baystatehealth.org


Primary Care • Vascular Surgery • Interventional Radiology • Neurology - Stroke 
Emergency Medical Services • Endocrinology • Gastroenterology - General • GI - Advanced Endoscopy 
Geriatrics & Palliative Care • Infectious Disease • Hospital Medicine Nocturnist 
Reproductive Endocrinology • Ob/Gyn Generalist • Pediatric Hospitalist 
Psychiatry - Inpatient & Outpatient • Breast Surgery • Breast Oncology 
General Surgery • General/Endocrine Surgeon • Peri-Operative Medicine

To learn more about Baystate Health and practicing and living in the wonderful communities of Western Massachusetts, please visit online for more information at: ChooseBaystateHealth.org

About Concord, MA

Concord, the seat of Middlesex County, is a friendly, close-knit community known for its tree-lined streets and historic landmarks. The town’s central location offers residents easy access to both Boston and New Hampshire, with convenient public transportation making the commute even easier.

Concord is home to historic landmarks such as the Concord Union Stockade, the Concord Naval Weapons Station, and the National Cemetery. These sites are just some of the many attractions that make Concord a great place to call home.

The town is also home to a number of private and public schools, as well as several parks and recreational areas. Additionally, Concord’s thriving economy provides residents with ample job opportunities.

With its rich history, comfortable living environment, and close proximity to Boston, Concord is an ideal place to call home.

If you would like more information please contact:
Diane Forte Willis
dfortewillis@emersonhosp.org
phone: 978-287-3002
fax: 978-287-3600
The country looks to Geisinger as a leader in bringing world-class care and coverage to everyone we serve. I am incredibly proud of the progress we are driving in expanding our value-based care model. Geisinger has a bright future ahead, and I am committed to building upon our legacy working with our dedicated and talented physicians and staff.

Jaewon Ryu, MD, JD
Geisinger President and CEO

We’re proud of the acknowledgement we receive for the work we do and the care we provide at Geisinger.

Our Employee Resource Groups (ERGs) provide opportunities for all Geisinger employees to build strong networks and develop professionally.

- **VETNET** – Support network for service members, veterans and their families
- **G-PRIDE** – Geisinger People Ready for Inclusion, Diversity and Equality
- **Women LEAD** – Legacy, Empowerment, Advocacy, Development
- **GAIN** – Geisinger Ability Inclusivity Network
- **BOLD** – Black Outreach Leadership Development

We've been recognized for our commitment to U.S. military veterans and their families.

We ensure equal care to LGBTQ patients and their families at Geisinger.