PRIMARY CARE REPORTS

The Practical CME Journal for Primary Care and Family Physicians

July 2020 VOL. 26, NO. 7

AUTHOR

Ellen Feldman, MD, Altru Health System, Grand Forks, ND

PEER REVIEWER

David J. Doucette, MD, Assistant Professor, Gynecology and Obstetrics, Loma Linda University School of Medicine, Loma Linda, CA

STATEMENT OF FINANCIAL DISCLOSURE

To reveal any potential bias in this publication, and in accordance with Accreditation Council for Continuing Medical Education guidelines, Dr. Wise (editor) reports he is involved with sales for CNS Vital Signs and Clean Sweep. Dr. Feldman (author), Dr. Doucette (peer reviewer), Mr. Schneider (editor), Ms. Mark (executive editor), Ms. Coplin (editorial group manager), and Ms. Johnson (accreditations director) report no financial relationships with companies related to the field of study covered by this CME activity.

RELIAS MEDIA

Mystery Malaise: Discovering and Defining Burnout

Introduction

2015 ICD-10-CM Z73.0: BURNOUT: a state of physical or mental exhaustion

2020 ICD-11 QD85: BURNOUT: a syndrome conceptualized as resulting from chronic workplace stress

In 1974, psychologist Herbert Freudenberger coined the term "burnout" to describe the drainage of energy and blunting of emotion experienced by workers employed in professions that demand empathy and compassion.[1] His work sparked interest worldwide, and inspired research studies regarding the effect of burnout on the workforce. Despite inconsistent results from these investigations, in 2015 burnout was recategorized from an amorphous concept to a mental "state," complete with a description and billable code in the 2015 International Classification of Diseases (ICD-10-CM).[2] In 2019, controversy ensued when the World Health Organization (WHO) reclassified burnout from a mental "state" to an occupational syndrome in the ICD-11, resulting in a clarification from WHO that burnout is not yet considered a medical diagnosis, per se.[3,4]

Where are we now? Despite 40 years of research, definitions of key terms and measures regarding burnout are not yet standardized, hindering efforts to compare studies and to evaluate efficacy of treatment. Signs of burnout, such as emotional depletion and poor energy, overlap with mental health diagnosis (depression and anxiety, for example), leading some to wonder if burnout is a subtype of a mental health disorder.[5]

In the 1970s, researchers described a triad of symptoms typically seen with burnout: emotional exhaustion, depersonalization, and a perception of ineffectiveness or a reduced sense of personal accomplishment in response to workplace stressors.[6] ICD-11 describes this syndrome in a similar manner, noting three dimensions: "1) feelings of energy depletion or exhaustion; 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and 3) reduced professional efficacy."[3]

Despite difficulty pinpointing a consistent definition of terms, studies are consistent in noting significant negative consequences from this syndrome. Healthcare professionals, and particularly physicians, are at high risk for developing burnout; a nuanced understanding of this condition gives the primary care provider (PCP) tools to self-monitor as well as care for patients who may present with signs of burnout. Burnout in physicians is associated with

EXECUTIVE SUMMARY

Many of our patients and colleagues have experienced burnout. Burnout is an occupational syndrome manifested by a triad of symptoms: emotional exhaustion, depersonalization and/or cynicism, and a sense of reduced personal accomplishment.

- ICD-11 notes three dimensions: 1) feelings of energy depletion or exhaustion; 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and 3) reduced professional efficacy.
- Healthcare professionals, and particularly physicians, are at high risk for developing burnout. Burnout in physicians is associated with an increased risk of medical errors, decreased quality of care, and reduced patient satisfaction. Without intervention, physicians with burnout are at increased risk of both developing health complications and of leaving the profession.
- In 2001, The Joint Commission mandated that all hospitals have a policy to address the well-being of physicians.
- The specialties with the highest burnout rates are urology, neurology, nephrology, diabetes and endocrinology, family medicine, radiology, obstetrics/gynecology, and rheumatology. Female physicians had a burnout rate of 48% compared to a burnout rate of 37% in their male peers. Burnout rates were highest in those ages 40 to 54 years.
- On entering the workforce, few young people anticipate a need to guard against burnout. Developing a basic habit of self-care and self-reflection may be the first step in guarding against the multifactorial progression and potentially devastating consequences of burnout. The biblical admonition "Physician, heal thyself" may be particularly pertinent today.

an increased risk of medical errors, decreased quality of care, and reduced patient satisfaction. Without intervention, physicians with burnout are at increased risk of both developing health complications and of leaving the profession.[7]

Although wellness most likely plays a role in avoiding burnout, it is clear from the literature that wellness measures alone are not a panacea for burnout. This is not surprising, since recent investigations have identified a link between burnout and specific workplace factors rather than individual characteristics or even type of work. Studies indicate that strong organizational measures and support, in conjunction with personal wellness efforts, are the most powerful intervention.[8]

This article provides a historical perspective of our evolving understanding of burnout, a review of scientific studies related to burnout with an emphasis on investigations involving medical providers, and an overview of treatment strategies. Two fictional patients, developed in stages, illustrate salient features of the syndrome, emphasize the pivotal role of taking a careful history, and highlight the potential for medical, social, and occupational consequences from unchecked burnout.

Introducing Mr. K.

Mr. K., a 48-year-old high school science teacher with no known medical problems, presents with a seven-month history of progressive fatigue and vague muscle aches. Other than a 12-pound weight gain over the past year, he notes no other associated symptoms. He is most concerned about the fatigue, stating, "I can't find energy to exercise or socialize … I come home from work wiped and don't even want to talk, just sleep … then I dread the morning because I have to go back to work — I think about quitting every day. If I didn't have my summers off, I would quit for sure." A physical exam is unremarkable, aside from a body mass index of 30. Basic lab work is significant only for mild hypercholesterolemia.

Historical Background

Images of drug addicts sitting in group sessions with blank expressions, staring at cigarettes slowly burning out, prompted psychologist Herbert Freudenberger to coin the term "burnout" in the 1970s. He borrowed this phrase from drug slang, where "burnout" was used casually to describe functional decline in peers. Freudenberger used the term in his research and writings to describe a phenomenon he observed among colleagues and patients, and experienced himself. Burnout is characterized by a steady decline in energy, motivation, and commitment to the job, as well as emotional depletion over time. Freudenberger noted that burnout occurred most often in professionals with jobs requiring empathy and personal involvement.[1,9,10]

Researchers Maslach and Jackson extended Freudenberger's work on burnout, and in the 1980s developed the Maslach Burnout Inventory (MBI), which is still in use today as one of the few validated research tools to measure the degree and effect of this state. The team was the first to describe burnout as an all-encompassing condition involving emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment stemming from the weight of professional stressors and responsibilities.[11]

Although the scientific literature did not identify burnout until the 1970s, there is evidence that the syndrome existed well before that time.

Perhaps the first known use of burnout as a metaphor appeared in 1599, in poem 7 of *The Passionate Pilgrim*, a poetry collection attributed to Shakespeare: "She burn'd with love, … She burn'd out love, as soon as straw outburneth."

Burnout as a full-blown syndrome appeared in popular literature by the turn of the 19th century, with progressive mental exhaustion, disillusionment, and loss of drive plaguing a protagonist in Thomas Mann's 1901 *Buddenbrooks* (revived as a movie in 2008).[12] The first hint of the syndrome in medical publications came in 1953, in a published case study of a psychiatric nurse diagnosed with "exhaustion reaction." Viewing this case in hindsight, the signs of burnout are evident.[13]

The bulk of empirical studies in this field began in the 1980s with the development of research-validated tools. Researchers have conducted hundreds of studies regarding burnout since that time, investigating a variety of occupations, including teachers, financial workers, retail workers, and first responders. Despite this breadth of research, standard definitions of terms, including "burnout," "emotional exhaustion," and "depersonalization," remain lacking, making results difficult to generalize. Illustrating this point, a 2018 systematic review of burnout in physicians found more than 142 definitions of burnout in the literature.[14,15]

Epidemiology

Although burnout research has extended to include many occupations and professions, most of the broad-based epidemiologic studies have involved medical workers.

Near the midpoint of the 20th century, articles describing "doctor discontent" and low morale pointed to a growth of burnout in the medical profession, with measurements of physician satisfaction declining from 1986 to 1997.

Studies at the time pointed to the growth of managed care, loss of physician autonomy, and increasing popularity of employed provider models.[16] In response, in 2001 the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) mandated that all hospitals have a policy to address well-being of physicians (distinct from disciplinary processes).[17]

In 2012, Shanafelt et al published results from the first national study of burnout in physicians with data collected from 7,288 physicians across all specialties. Using the MBI for measurement, the investigators found that 45.8% of the respondents endorsed at least one symptom of burnout.[18] In 2015, Shanafelt et al published data regarding burnout collected in 2014 from 6,880 U.S. physicians and compared the results to the earlier survey. There was a significant increase in reports of burnout among U.S. physicians — 45.4% in 2011 to 54.4 % in 2014 ($P < 0.001$); this trend was consistent across all 24 specialties.[19]

The medical profession responded to this news with alarm, and with action. Given the association of burnout in providers with increased medical errors, higher costs, poor outcomes, and higher staff turnover, the American Medical Association (AMA) launched several comprehensive initiatives. AMA STEPS Forward, an online customizable collection of resources for clinicians and healthcare organizations, emerged.[20] The National Academy of Medicine (NAM) began a broad, multidisciplinary program to intervene at the systems level to prevent or address burnout. Some of the large healthcare organizations took the same approach — implementing system-level solutions to this pervasive problem.[21]

Perhaps some of these measures helped turn the tide. In 2017, Shanafelt again surveyed U.S. physicians using methods similar to those employed in the previous two studies (in 2011 and 2014). The 2017 survey revealed that 43.9% of surveyed physicians reported at least one symptom of burnout on the MBI compared with 54.4% in 2014 ($P < 0.001$) and more similar to the 2011 level of 45.4 % ($P = 0.04$).[22]

One important aspect regarding the multiple studies conducted by Shanafelt et al (in 2011, 2014, and 2017) is that in each round, the team standardized criteria and cut-off values to measure burnout. The critical importance of this should not be underestimated, since there is no global consensus regarding how to interpret burnout scores (gradient vs. cut-off), optimal instrumentation, or even number of symptoms required. Shanafelt et al, by repeating studies in a structured manner, brings some clarity to a murky aspect of burnout research.

In 2020, "The Medscape National Physician Burnout and Suicide Report 2020" reported data from more than 15,000 physicians and revealed several subgroups of higher risk within the larger pool.[23]

The specialties with the highest burnout rates, as measured in this study, were:

1. Urology: 54%
2. Neurology: 50%
3. Nephrology: 49%
4. Diabetes and endocrinology; family medicine; radiology; obstetrics/gynecology; rheumatology: 46%.

Internal medicine "tied" for 11th place with cardiology, each with a burnout rate of 44%. On the other end of the spectrum, public health and preventive medicine clocked in with the lowest subspecialty rate of burnout at 29%.

Other notable results from this survey were that female physicians had a burnout rate of 48% compared to a burnout rate of 37% in their male peers. When age was factored, respondents between the ages of 40 and 54 years of age reported the highest burnout rate of 48%, while participants in younger (25 to 39 years) and older (55 to 73 years) age groups reported burnout rates of 38% and 39%, respectively. These findings are consistent with patterns seen in past studies.[23]

Although burnout studies in healthcare are more numerous than studies of burnout in general, it is vital for providers to recognize that burnout affects workers in many professions and occupations. In general, the burnout rate among workers in the United States hovers around 28% — a high rate, but significantly lower than the burnout rate in healthcare providers.[22] Traditionally, the assumption has been that burnout is more likely in professions with high demands, where compassion and empathy are necessary. In 2017, Salvagioni et al conducted a systematic review of prospective studies looking at antecedents and consequences of burnout in general. They concluded that burnout is not necessarily specific to the helping professions, but the vulnerability to burnout is related to a balance between work demands and work resources. That is, burnout tends to develop when work demands (such as workload expectation and time pressure) outstrip work resources (such as autonomy and institutional support).[24]

A major barrier to research in this field, as noted previously, is variability in terminology and definitions. Attempts to standardize and find clinically useful tools to evaluate patients are ongoing. In Sweden, there is momentum toward using a clinical diagnosis called exhaustion disorder (ED) to describe patients who present with exhaustion caused by identified stressors, present for at least

six months.[25] In the Netherlands, it is suggested to use the term "clinical burnout" to describe this population.[26] In the United States, burnout remains a "syndrome" separate from a mental health or medical diagnosis.

However, most investigators recognize that there is an overlap between a mental health diagnosis, such as depression, and burnout, and recommend a careful history and assessment of symptoms to help identify the appropriate treatment. There are equally valid concerns expressed in the literature regarding missing a diagnosis of depression while focusing on burnout and vice versa.[27,28]

Introducing Dr. M.

Dr. M., a 44-year-old PCP, presents for an urgent visit. "I think I may be burnt-out, or have something neurologic," she explains. "I have no energy. I can't concentrate. I am dragging by mid-morning and hoping for 'no-shows.' I used to love the challenge of diagnosing and treating patients; now I just wish they would all just take care of themselves. I dread walking into the clinic each day. I have chart deficiencies, and my nurse has to keep reminding me to check lab results." A physical exam, including neurological examination, is unremarkable. Basic labs are significant only for a slightly elevated fasting blood sugar of 102.

The Consequences of Untreated Burnout

Burnout, as defined by Maslach and Jackson, is an occupational syndrome manifested by a triad of symptoms: emotional exhaustion, depersonalization and/or cynicism, and a sense of reduced personal accomplishment.[11] When viewed through the lens of a healthcare provider, any of these conditions presents clear barriers to patient care. In healthcare, emotional exhaustion may present as a feeling of depletion or emptiness after a day of seeing patients, or a creeping feeling of dread in anticipation of seeing patients. Depersonalization and/or cynicism leads to a decreased ability to empathize with patients and colleagues, while a sense of reduced personal accomplishment makes it difficult for the provider to feel effective or perceive value in patient care or other work-related tasks.

Studies have shown significant association between physician burnout and patient satisfaction with inpatient and outpatient care, patient-reported compliance with medical treatment, and a higher rate of medical errors. Direct patient care is not the only healthcare casualty of burnout; other studies have linked physician burnout with decreased productivity, high job turnover, and increased job dissatisfaction.[7,28,29]

Physician burnout also may have direct impact on the health of the provider. Depression symptoms often overlap with burnout. Many studies have suggested a bidirectional relationship between provider burnout and depression, with each condition exacerbating the other.[31]

There are studies that attempt to link substance abuse and suicide in providers with burnout. A 2012 study of alcohol abuse in surgeons pointed to a 25% increased risk of unhealthy alcohol use associated with burnout in this field.[32] Several researchers point to burnout as a suspected factor in both suicidal ideation and completed suicides in healthcare providers, although this has not been well studied.[30,31]

In the general population, the occupational consequences of burnout will look different, depending on the specific job duties and occupation. However, in a broad sense, studies show that burnout leads to job dissatisfaction, poor job attendance, an increase in sick days, and a decline in performance.[33]

In the 2017 review by Salvagioni et al of prospective studies regarding burnout, researchers identified 36 eligible studies, most from Scandinavian countries, for inclusion. The occupations of subjects varied and included teachers, industry workers, financial sector workers, and healthcare providers. Unfortunately, heterogeneity of methods and outcomes did not allow a meta-analysis.[24] (*See Table 1.*)

Back to Mr. K., with Additional History

A careful history reveals that Mr. K.'s symptoms started about eight months after he earned a desired promotion at work. He explains, "I loved my job when I could focus on teaching. Now I feel pulled in half — supervising new teachers, making schedules, meeting with administrators, and still teaching six classes each day. I spend most of my time checking off meaningless boxes. Some days I feel like the kids just get in my way. I cut back on my office hours. I live for weekends, but find I am playing 'catch-up' – finishing up work that should have been done during the week." Mr. K. notes a family history of mild depression treated without medication (his mother) and no personal mental health history. He notes a recent, mild increase in alcohol use, and that he dropped out of his racquetball league, citing time concerns. He denies any suicidal thoughts.

His score on the Beck Depression Inventory (BDI-2) is 14 — indicating mild clinical depression.[34] He remarks, "If I took this during summer, it would fall to about a 3!"

Recognizing Burnout

Mr. K.'s weak family history and lack of a mental health history in this regard lower his risk for developing a major depressive disorder. Given the clear connection of symptoms to his workplace, urging him to take steps to address burnout is a reasonable first intervention. This may entail a shift in his job responsibilities, but also should include an emphasis on personal wellness, including exercising and decreasing alcohol use.

With no pathognomonic test or known biologic marker, burnout identification hinges on a thorough history and physical exam. ICD-11 notes the differential for burnout includes adjustment disorder, anxiety, and mood disorders.[3] A period longer than six months makes adjustment disorder unlikely. The increase in alcohol use, social disconnection, and elevated score on the BDI are symptoms suggestive of depression, but the history solidly points toward burnout, with signs of emotional exhaustion ("come home from work wiped out"), depersonalization ("kids just get in my way"), and a reduced sense of personal accomplishment ("checking off meaningless boxes"). Significantly, Mr. K. notes his symptoms remit during summer vacation, confirming a strong

Table 1. Findings from the Salvagioni et al Systemic Review of Prospective Studies Regarding Burnout

Author; Year	Number of Participants; Population; Location	Follow-Up Length; Outcome	Result	Note
Armon et al; 2008	1,064; healthy employees; Israel	1.5 years; obesity	No significant association with burnout scores	Controlled for multiple factors, including physical activity and age
Kitaoka-Higashiguchi et al; 2009	383; male managers – industry; Japan	4-5 years; hypercholesterolemia	OR = 2.78 (1.20- 6.46)	Controlled for multiple factors, including age, alcohol and tobacco use, exercise
Melamed et al; 2006	677; factory workers; Israel	3-5 years; type 2 diabetes	OR = 1.84 (1.19- 2.85) $P < 0.01$	Controlled for multiple factors, including age, sex, exercise, BMI
Appels et al; 1991	3,210; male employees at health check; Netherlands	4.2 years; coronary heart disease	RR = 2.16 (1.31-3.55) $P < 0.01$	Controlled for smoking
Toker et al; 2012	8,838; workers at health check; Israel	7 years; coronary heart disease	HR = 1.41 (1.08-1.85) $P < 0.05$	Controlled for multiple factors, including age, sex, tobacco use, exercise
Toppinen-Tanner et al; 2009	7,897; workers in forest industry; Finland	10 years; hospitalization for cardiovascular disorder	HR = 1.10 (1.02-1.19)	Controlled for multiple factors, including age, sex, medications
Armon et al; 2010	1,068; workers at health check; Israel	3 years; musculoskeletal pain	OR = 2.09 (1.07- 4.10) $P < 0.05$	Controlled for multiple factors, including age, sex, depressive symptoms
Melamed et al; 2009	650; factory workers; Israel	3-5 years; musculoskeletal pain	OR = 2.45 (1.35-4.45) $P < 0.01$	Controlled for multiple factors, including age, sex, BMI, tobacco
Leone et al; 2009	5,328; workers from 45 companies; Netherlands	4 years; prolonged fatigue	HR = 1.33 (1.16-1.53)	Controlled for multiple factors, including fatigue at baseline, age, sex

OR: odds ratio; RR: relative risk; HR: hazard ratio; BMI: body mass index

symptom link with work. This finding is more suggestive of burnout, since symptoms of depression tend to be pervasive and less apt to change with external circumstances.

There has been theoretical discussion in the literature that dysregulation of the hypothalamus-pituitary-adrenal (HPA) axis is related to burnout, and may be responsible for some of the symptoms seen in these patients. However, results of studies attempting to evaluate HPA as a mechanism have been inconclusive. Other researchers, seeking a biomarker for burnout with clinical utility in diagnosis and treatment, have looked at a variety of endocrine, metabolic, and immunologic factors related to chronic stress. Efforts thus far have not yielded a definitive or even suggestive culprit, perhaps as a result of the heterogeneity of the diagnosis and/or the highly individualized nature of a stress response.[35]

The MBI, the structured questionnaire developed in 1981 by Maslach and Jackson, is useful for research purposes, but does not have clear clinical utility. In part, this is because of its length. Efforts to standardize an abbreviated version of the MBI are underway.

There is an Education Survey within the MBI to use for teachers, and a Human Services Survey with items applicable to healthcare professionals. All items rely on self-reported frequency of the specified feeling (on a gradient from 0-6).[36]

The high rate of burnout in healthcare professionals and the consequent effect on patient care has spurred development of specialized instruments to measure healthcare provider burnout. The National Academy of Medicine suggests several different tools.[37] These include:

- the Human Services Survey within the MBI (22-item or two-item format; developed in the United States in 1981; some U.S. benchmark data available);[38]
- the Oldenburg Burnout Inventory (16 items; developed in Germany in

2002; no U.S. benchmark data; not just healthcare workers);[39]

• the Physician Work-Life Study single item embedded in "Mini-Z" (one item: "How would you rate your burnout?"; developed in the United States in 2000; no U.S. benchmark data);[40]

• the Copenhagen Burnout Inventory (19 items; developed in Denmark in 2015; no U.S. benchmark data; not just healthcare workers).[41]

All of these seem to be most suited for organizations surveying employees, and less useful for the office-based PCP. However, a basic knowledge of the surveys is useful since patients may present after taking a survey at work or online.

Back to Dr. M., with Additional History

A careful history from Dr. M. reveals that her symptoms started about one year after her teenage son's diagnosis with Crohn's disease, and eight months after starting Saturday morning clinic hours. "My son is doing fine," she says. "So, I don't think my symptoms have anything to do with him. It's me. I just worry that I am missing too much of his life, and feel guilty that I do not spend more time with him. I have no free time — I am glued to the computer every night, responding to patient email requests, trying to finish charts, re-checking labs. Then I go to sleep wondering where the time went and if any of my work really matters to anyone other than the administrators. I wake up in the middle of the night thinking I may have overlooked something in a patient after all. I committed to the Saturday morning clinic because we need the income, but all week I worry about how busy it will be; I am just fried after clinic is over." Dr. M. notes a history of nine-month treatment with selective serotonin reuptake inhibitors (SSRIs) for anxiety in her early 20s and a family history of depression and anxiety (her father and aunt), responsive to SSRIs. Her BDI score is 15 — indicative of mild depression.[34]

Her score on the Global Anxiety Score 7 (GAD-7) is 12 — indicating moderate anxiety.[42] She denies any suicidal thoughts but notes that she has turned down social engagements because of her lack of energy, and recently dropped some commitments to her son's school.

Addressing Burnout

Dr. M.'s statements regarding dreading going to work reflect the emotional exhaustion seen in burnout. The fact that she wishes her patients "would all just take care of themselves" indicates depersonalization, and the thought that all of her work is meaningless corresponds with the final element in the triad of burnout — a reduced sense of personal accomplishment. However, her personal and family history of anxiety puts her at high risk for a recurrence of this disorder. A careful examination of her statements indicates prominent symptoms of guilt, social withdrawal, worry, and suggest a sleep disorder — all more indicative of depression and anxiety than burnout.

Both cases presented here — Mr. K. and Dr. M. — illustrate the complex interaction and overlap of cardinal signs of burnout with symptoms of depression and anxiety. The conflation of symptoms of burnout and depression may lead to overlooking a diagnosis of depression in physicians, according to Maria Oquendo, MD, PhD. Her concern, echoed by others in the field, is that the stigma of a depression diagnosis coupled with the push from organizations to screen providers for burnout, may lead symptomatic physicians to leap at a burnout label rather than a depression or anxiety diagnosis.[43]

The relationship among burnout, depression, and anxiety continues to be a subject of investigation and debate. The results of a meta-analysis in 2017 concluded that these are different animals — but that a prior history of depression or anxiety may heighten an individual's response to burnout. The case of Dr. M. illustrates this point.[44]

Studies looking at the efficacy of interventions for burnout suffer for many of the same reasons cited earlier, regarding research in this field. A lack of diagnostic consistency makes it difficult to generalize results.

Recognizing the heterogeneity of study methods and parameters, in 2017 Panagioti et al used innovative statistical modeling to present a meta-analysis regarding interventions to address burnout in physicians. In all, 19 studies incorporating 1,550 physicians were included.

They identified three main objectives in their study:[45]

1. Assess the effectiveness of interventions to reduce the development of physician burnout.
2. Assess which type of intervention — organizational or individual — is more effective.
3. Assess if the experience of the physician or type of healthcare setting has an impact on the effectiveness of the intervention.

Table 2 describes several characteristics of the studies.[43]

After analysis of treatment effect, Panagioti et al concluded that organizational-directed interventions have higher treatment effect than physician-directed or individual interventions. They also found the most effect when experienced physicians are involved and when interventions are in primary care settings.[45]

The finding that workplace initiatives are essential in addressing worker burnout, and that a combination of workplace and individual efforts reduce burnout, is consistent among several recent studies.

This also is consistent with the theory put forth by Savagioni et al (discussed earlier) that burnout vulnerability arises as the result of an uneven balance between workplace demands and resources.[24]

Several larger health organizations have embarked on initiatives to do their part. Recently, the Mayo Clinic described organizational strategies leading to a 7% reduction in burnout over two years,while the *Journal of the American Medical Association* published a "Charter on Physician Well-Being," written by physicians, educators, and wellness professionals describing organizational and individual guidelines to address burnout.[46,47]

In January 2020, Agarwal et al published a qualitative report based on group interviews and discussions regarding burnout with 26 PCPs over a four-month period.[47] Many of the interventions suggested by this population echoed themes identified by the

Continued on page 84

Table 2. Selected Characteristics of the Studies Included in the 2017 Meta-Analysis by Panagioti et al

Year of Study; Country; Healthcare Setting	Intervention	Physician Experience in Years of Practice
2005; Israel; primary care	Educational workshop weekly for three months*	Mean years = 9
2008; Australia; oncologists, inpatient unit and clinic	Intensive 1.5-day workshop with role play followed by monthly video conferences*	Mean years = 16
2009; United States; pediatric physicians	Stress reduction seminars*	Mean years = 11
2010; Belgium; internal medicine residents – hospital	30-hour communication skills training; 10-hour stress management skills training*	Mean years = 3
2011; United States; ICU physicians	Revised staffing schedules for 14 months**	Mean years = 8
2011; Argentina; pediatric residents in tertiary care hospital	Two 2.5-hour self-care workshops*	Mean years > 5
2012; Canada; ICU	Revised shiftwork staffing with particular attention to overnight shift relief**	Mean years > 10
2012; United States; general medicine inpatient	Revised scheduling (from four-week to two-week rotations)**	Mean years = 4
2013; United States; outpatient specialty clinics – residents and fellows	12-week individual and team-based exercise programs with incentives*	Mean years < 3
2014 ; United States; general medicine clinic	19 bi-weekly discussion groups with mindfulness, education, shared experiences** Compensated as paid time by organization**	Mean years = 8
2014; United States; internal medicine interns in oncology inpatient rotation	Five hours of protected sleep time (12:30-5:30 a.m.) for four weeks**	Range years: 1-2
2014; Spain; primary care	Eight sessions of meditation instruction/practice over two months (plus a full-day, eight-hour session)*	Mean years =10
2015; Spain; mixed specialty clinics	Two-month mindfulness-based stress reduction program*	Mean years = 9
2015; Australia; oncologists in major cancer centers	Seven-hour interactive workshop with stress reduction techniques; follow-up telephone call*	Mean years > 6
2015 ; Australia; first-year interns – inpatient	Three hour-long debriefing sessions and ongoing focus group**	Mean years = 1
2015; United States; primary care	Changes in workflow and focus on communication**	
2015; Canada; residents in ICU with overnight duties (anesthesia, surgery, ER)	Switch from 16- and 24-hour blocks to 12-hour blocks (six months)**	Range years: 1-3
2015; United States; first-year internal medicine residents – inpatient	18 bimonthly groups with discussions regarding stress, balance, job satisfaction*	Range years: 1-2
2016; Netherlands; primary care	Eight 2.5-hour weekly sessions and a full-day retreat focused on mindfulness*	Mean years = 24

ICU: intensive care unit; ER: emergency room
*physician intervention
**organizational intervention

Continued from page 82

Mayo Clinic's recommended organizational changes and those included in the "Charter on Physician Well-Being."

In general, these organizational guidelines are:[8]

1. Leadership: According to several Mayo Clinic studies, "bad" leaders who do not inspire trust or give recognition where due, often drive burnout. Positive interaction with direct supervisors is associated with decreases in burnout within an organization.

2. Organizational motivators: Switch from productivity-based motivators (such as bonuses) to wellness-based motivators (such as greater time flexibility or time off).

3. Peer support: Work toward encouraging camaraderie among employees, supporting gatherings both outside and inside the workplace.

4. Actively promoting self-care for employees: For example, provide healthy meals and snacks on-site and support gym memberships.

5. Encouraging all workers to consider work-life balance and adjust as necessary: Allow and encourage options to choose hours within certain boundaries — for example, starting the day earlier than usual or ending later. In medicine, there have been several studies looking at electronic health records (EHR) and burnout. Studies consistently show evidence of providers feeling burdened from nonmeaningful EHR documentation and data entry.[48,49]

6. Burnout prevention: Target efforts to educate about burnout both during training and in continuing education and professional development courses.

Although there are studies looking at individual interventions to prevent or treat burnout without organizational support, these studies have limitations, including short follow-up periods, homogenous populations, and poor study design.

Even considering the limitations, there still are modest indications pointing to the efficacy of mindfulness, stress management training, exercise, other self-care skills, and communication skills training in the prevention and treatment of burnout.[50] Of all these interventions, mindfulness-based exercises seem to be the most popular in published studies. Presented in an array of formats from guided imagery for tennis players to smartphone apps for medical providers, mindfulness techniques show growing evidence for a role in preventing and treating burnout.[51,52]

A yet-unanswered question is if decreased burnout in medical providers leads to better patient care. In 2019, results of a 10-year initiative from Ohio State University Wexner Medical Center to decrease provider and staff burnout associated a significant increase in patient satisfaction scores and a decrease in medical errors with these efforts. Mindfulness classes were the center of the approach to decrease burnout in residents and attending physicians, as was a change in management strategy and the introduction of system-wide wellness programs.[53] The number of studies investigating decreased burnout and improvement in patient care appears to be on the rise.[54,55]

Follow-Up on Mr. K. and Dr. M.

Six-month follow-up: Mr. K. notes, "I renegotiated my position with my principal, dropped my teaching to four classes instead of six, and dedicated the other two periods a day to my administrative work. I did not lose much in the way of pay and I feel human again. Most importantly, I am back to enjoying teaching!" Feeling more energetic, he joined other teachers in a volleyball league, decreased alcohol use, lost weight, and is working on diet-related control of hypercholesterolemia. His BDI-2 score is 8.

Six-month follow-up: Dr. M. is now treated for her anxiety with escitalopram 10 mg and cognitive behavioral therapy, which has helped her sleep. She has made some fundamental changes to her work schedule (reducing the frequency of her Saturday clinic, for example, and limiting her schedule despite administrative pressure) and says, "I am working at recognizing my limits, and where anxiety overcomes reason."

She uses brief mindfulness techniques daily, and reports better focus at work, improved chart completion, and more time with her son. She says, "I feel like I was sucked into a whirlpool of work and couldn't find my way out. Putting it all on 'pause' to figure out who and what was important to me was the first step. I know putting my health first sets an example for my son — hopefully, he will learn from my experience."

Summary

Our understanding of burnout is evolving from the original description in 1974. Research shows burnout tends to develop when there is a mismatch in work demands and work resources, rather than because of the effect of a specific type of profession. Ambiguity in terms and definitions, and the lack of objectivity, make it difficult to generalize findings. Although there is longstanding agreement that emotional exhaustion, depersonalization or cynicism, and decreased sense of accomplishment or work efficacy are the three dimensions of burnout, the field lacks agreement on the severity of impairment necessary for burnout, including a basic consensus regarding the need for one, two, or all three of these signs to be present.

However, it is difficult to dispute that there are reports of burnout worldwide and across a variety of jobs and professions. There is enough concern regarding the potential for harm to recommend guidelines for prevention, recognition, and treatment. Emerging studies show the effect of putting these guidelines into action.

The role of the PCP in addressing burnout is crucial in many respects. Advising patients to initiate wellness interventions on a personal level, and empowering patients to seek assistance on an organizational level, appears to be key to reducing burnout. Be on the lookout for potential medical and psychological comorbidities. Remember to differentiate burnout from disorders of mental health, and be aware of the potential for overlap. Specific recommendations include:

1. Educate patients regarding recognition of burnout to help in prevention efforts and/or to address burnout in early stages.

2. Take a careful history. Assist patients in distinguishing the signs of burnout (emotional depletion, cynicism, sense of reduced personal accomplishment) from symptoms of depression and anxiety to initiate proper treatment. Burnout-related symptoms most likely require a change in work habits or other occupational interventions not particularly useful for depression or anxiety, while these latter diagnoses have specific, evidence-based treatments.

3. The PCP, as a medical provider, is wise to recognize the high potential for burnout inherent in the practice of medicine. Self-monitor and address early any signs of emotional exhaustion, cynicism, and/or a sense of reduced personal accomplishment that indicates the onset of burnout.

4. Remember that burnout prevention and treatment most often requires organizational-level interventions, such as changes in work expectations, healthier work environment, and peer support. Consider being an advocate for such interventions at your own place of work — reminding administrators that a healthy work-life balance may trickle down to a healthier balance sheet via better patient satisfaction, provider retention, and the potential for reduced medical errors.

On entering the workforce, few young people anticipate a need to guard against burnout. Yet, just as the simple act of handwashing has critical importance in the complex issue of infection control, developing a basic habit of self-care and self-reflection may be the first step in guarding against the multifactorial progression and potentially devastating consequences of burnout.

References

1. King N. When a psychologist succumbed to stress, he coined the term 'burnout.' National Public Radio. Dec. 8, 2016. https://www.npr.org/2016/12/08/504864961/when-a-psychologist-succumbed-to-stress-he-coined-the-term-burnout
2. ICD10Data.com. 2020 ICD-10-CM Diagnosis Code Z73.0 Burn-out. http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z69-Z76/Z73-/Z73.0
3. ICD-11 for Mortality and Morbidity Statistics (Version 04/19). QD85 Burn-out. https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/129180281
4. Brooks M. Burnout inclusion in ICD-11: Media got it wrong, WHO says. Medscape. June 7, 2019. https://www.medscape.com/viewarticle/914077
5. Orosz A, Federspiel A, Haisch S, et al. A biological perspective on differences and similarities between burnout and depression. *Neurosci Biobehav Rev* 2017;73:112-122.
6. Maslach C, Leiter MP. Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry* 2016;15:103-111.
7. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: Contributors, consequences and solutions. *J Intern Med* 2018;283:516-529.
8. Reith TP. Burnout in United States healthcare professionals: A narrative review. *Cureus* 2018;10:e3681.
9. Schaufeli WB. Burnout: A short socio-cultural history. https://www.wilmarschaufeli.nl/publications/Schaufeli/481.pdf
10. Freudenberger HJ. Staff burn-out. *J Soc Issues* 1974;30:159-165.
11. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav* 1981;2:99-113.
12. Editor Eric's The Greatest Literature of All Time. Buddenbrooks. The end of heroes and villains. http://www.editoreric.com/greatlit/books/Buddenbrooks.html
13. Schwartz MS, Will GT. Low morale and mutual withdrawal on a mental hospital ward. *Psychiatry* 1953;16:337-353.
14. Rotenstein LS, Torre M, Ramos MA, et al. Prevalence of burnout among physicians: A systematic review. *JAMA* 2018;320:1131-1150.
15. Schaufeli WB. Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology* 2003;29. https://doi.org/10.4102/sajip.v29i4.127
16. Linzer M, Konrad TR, Douglas J, et al. Managed care, time pressure, and physician job satisfaction: Results from the Physician Worklife Study. *J Gen Intern Med* 2000;15:441-450.
17. Dunn PM, Arnetz BB, Christensen JF, Homer L. Meeting the imperative to improve physician well-being: Assessment of an innovative program. *J Gen Intern Med* 2007;22:1544-1552.
18. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med* 2012;172:1377-1385.
19. Shanafelt TD, Hasan O, Dyrbye LN, et al. Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. *Mayo Clin Proc* 2015;90:1600-1613.
20. American Medical Association. Physician Burnout. https://www.ama-assn.org/topics/physician-burnout
21. National Academy of Medicine. Action Collaborative on Clinician Well-Being and Resilience. https://nam.edu/initiatives/clinician-resilience-and-well-being/
22. Shanafelt TD, West CP, Sinsky C, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. *Mayo Clin Proc* 2019;94:1681-1694.
23. Kane L. Medscape National Physician Burnout & Suicide Report 2020: The Generational Divide. Medscape. Jan. 15, 2020. https://www.medscape.com/slideshow/2020-lifestyle-burnout-6012460
24. Salvagioni DAJ, Melanda FN, Mesas AE, et al. Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PLoS One* 2017;12:e0185781.
25. Adamsson A, Bernhardsson S. Symptoms that may be stress-related and lead to exhaustion disorder: A retrospective medical chart review in Swedish primary care. *BMC Fam Pract* 2018;19:172.
26. Lastovkova A, Carder M, Rasmussen HM, et al. Burnout syndrome as an occupational disease in the European Union: An exploratory study. *Ind Health* 2018;56:160-165.
27. Bauernhofer K, Bassa D, Canazei M, et al. Subtypes in clinical burnout patients enrolled in an employee rehabilitation program: Differences in burnout profiles, depression, and recovery/resources-stress balance. *BMC Psychiatry* 2018;18:10.
28. Rotenstein LS, Zhao Z, Mata DA, et al. Substantial overlap between factors predicting symptoms of depression and burnout among medical interns. *J Gen Intern Med* 2020; Feb. 5. doi: 10.1007/s11606-020-05664-x. [Online ahead of print].
29. Panagioti M, Geraghty K, Johnson J, et al. Association between physician burnout and patient safety, professionalism, and patient satisfaction: A systematic review and meta-analysis. *JAMA Intern Med* 2018;178:1317-1330.
30. Yates SW. Physician stress and burnout. *Am J Med* 2020;133:160-164.
31. Oreskovich MR, Kaups KL, Balch CM, et al. Prevalence of alcohol use disorders among American surgeons. *Arch Surg* 2012;147:168-174.
32. Patel RS, Bachu R, Adikey A, et al. Factors related to physician burnout and its consequences: A review. *Behav Sci (Basel)* 2018;8:98.

33. Kärkkäinen R, Saaranen T, Räsänen K. Return-to-work coordinators' practices for workers with burnout. *J Occup Rehabil* 2019;29:493-502.
34. Kansas Department of Health and Environment. Beck's Depression Inventory. https://www.kdheks.gov/c-f/integration_toolkits/Beck_Depression_Inventory_II.pdf
35. Jonsdottir IH, Dahlman AS. Mechanisms in endocrinology: Endocrine and immunological aspects of burnout: A narrative review. *Eur J Endocrinol* 2019;180:R147-R158.
36. Poghosyan L, Aiken LH, Sloane DM. Factor structure of the Maslach Burnout Inventory: An analysis of data from large scale cross-sectional surveys of nurses from eight countries. *Int J Nurs Stud* 2014;51:1416-1417.
37. National Academy of Medicine. Valid and reliable survey instruments to measure burnout, well-being, and other work-related dimensions. https://nam.edu/valid-reliable-survey-instruments-measure-burnout-well-work-related-dimensions/
38. Mind Garden. Maslach Burnout Inventory. https://www.mindgarden.com/117-maslach-burnout-inventory
39. Tipa RO, Tudose C, Pucarea VL. Measuring burnout among psychiatric residents using the Oldenburg Burnout Inventory (OLBI) instrument. *J Med Life* 2019;12:354-360.
40. Vanderbilt University Medical Center. Overview of Utility of Mini-Z. https://www.vumc.org/health-wellness/sites/vumc.org.health-wellness/files/public_files/PDFs/wlc/wlcMiniZ.pdf
41. Kristensen TS, Borritz M, Villadsen E, Christensen KB. The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress* 2005;19:192-207.
42. Spitzer RL, Kroenke K, Williams JBW, Löwe B. A brief measure for assessing generalized anxiety disorder: The GAD-7. *Arch Intern Med* 2006;166:1092-1097.
43. Oquendo MA, Bernstein CA, Mayer LES. A key differential diagnosis for physicians—Major depression or burn-out? *JAMA Psychiatry* 2019;76:1111-1112.
44. Koutsimani P, Montgomery A, Georganta K. The relationship between burnout, depression, and anxiety: A systematic review and meta-analysis. *Front Psychol* 2019;10:284.
45. Panagioti M, Panagopoulou E, Bower P, et al. Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. *JAMA Intern Med* 2017;177:195-205.
46. Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: Nine organizational strategies to promote engagement and reduce burnout. *Mayo Clinic Proc* 2017;92:129-146.
47. Thomas LR, Ripp JA, West CP. Charter on physician well-being. *JAMA* 2018;319:1541-1542.
48. Arndt BG, Beasley JW, Watkinson MD, et al. Tethered to the EHR: Primary care physician workload assessment using EHR event log data and time-motion observations. *Ann Fam Med* 2017;15:419-426.
49. Sinsky C, Colligan L, Li L, et al. Allocation of physician time in ambulatory practice: A time and motion study in 4 specialties. *Ann Intern Med* 2016;165:753-760.
50. Kinnunen SM, Puolakanaho A, Tolvanen A, et al. Does mindfulness-, acceptance-, and value-based intervention alleviate burnout?—A person-centered approach. *International Journal of Stress Management* 2019;26:89-101.
51. Walker SP. Mindfulness and burnout among competitive adolescent tennis players. *South African Journal of Sports Medicine* 2013;25. doi: 10.17159/2413-3108/2013/v25i4a344
52. Roy A, Druker S, Hoge EA, Brewer JA. Physician anxiety and burnout: Symptom correlates and a prospective pilot study of app-delivered mindfulness training. *JMIR Mhealth Uhealth* 2020;8:e15608.
53. Moffatt-Bruce SD, Nguywn MC, Steinberg B, et al. Interventions to reduce burnout and improve resilience: Impact on a health system's outcomes. *Clin Obstet Gynecol* 2019;62:432-443.
54. Boissy A, Windover AK, Bokar D, et al. Communication skills training for physicians improves patient satisfaction. *J Gen Intern Med* 2016;31:755-761.
55. Congiusta S, Ascher EM, Ahn S, Nash IS. The use of online physician training can improve patient experience and physician burnout. *Am J Med Qual* 2019; Aug. 30. doi: 10.1177/1062860619869833. [Online ahead of print].

CME Questions

1. Which of the following is true of research on burnout since 1974?
   a. It has standardized terms and definitions for important concepts, such as "emotional exhaustion" and "depersonalization."
   b. It has been hampered by the lack of standard definitions, even for the term "burnout," and that there is no standardization of the level of impairment needed to be considered burnout.
   c. It has been hampered by the lack of standard definitions, even for the term "burnout," but has identified very clear criteria and standardization for understanding the extent of burnout.
   d. It has found burnout in a broad number of professions; recent studies suggest that the risk of burnout is highest in jobs with low person-to-person interaction and a high number of work hours.
2. When first conceptualized, burnout was thought to be a phenomenon predominately occurring in workers whose professions required compassion and empathy. Research since that time:
   a. has shown that burnout is not specific to a type of profession, but the development of burnout is more likely when work demands outstrip work resources.
   b. has shown that burnout is not specific to a type of profession but is more likely to develop in workers with specific personality traits.
   c. has shown that burnout is more likely in jobs where compassion and empathy are required because of the personality of the workers attracted to these fields.
   d. has shown that burnout is highest in jobs requiring compassion and empathy, but that higher salaries or other external rewards for this type of job make burnout less likely.

3. There is discussion in the literature that burnout is a subtype of depression or anxiety. Current understanding and concerns about this relationship:
   a. include concerns that medical providers will avoid a burnout diagnosis but be more accepting of a depression or anxiety diagnosis, since the latter two are more conventional and have clearcut treatment guidelines.
   b. include the idea that addressing burnout requires the same interventions used to treat depression and/or anxiety.
   c. include the idea that there is a bidirectional relationship between depression/anxiety and burnout, with any one of these fueling the other, but each is a distinct entity.
   d. include that there is no relationship among these disorders; on careful examination, symptoms do not overlap, and each is differentiated easily.
4. Which of the following is true of burnout in the medical profession:
   a. It continues to climb despite a variety of efforts, such as mandatory reduction in hours worked and education regarding the importance of self-care.
   b. It is consistently highest in the youngest age group surveyed (ages 25-39 years), most likely as the result of the competing needs of family and work, and financial pressures because of large debt.
   c. It was 43.9% in the 2017 survey of physicians — less than 2011 and 2014 levels, possibly as a result of large-scale interventions championed by healthcare-related organizations.
   d. It can be addressed effectively when individual providers adopt wellness efforts, such as mindfulness exercises, healthy eating habits, and improved sleep hygiene.
5. There is general agreement that emotional exhaustion, depersonalization or cynicism, and a reduced sense of effectiveness are central to burnout syndrome. Which of the following is true?
   a. These feelings and perceptions may occur to a different degree and, in fact, may not all be present in persons presenting with burnout.
   b. All three components must be present to a moderate to severe level for burnout to be considered.
   c. These terms are relevant for a first step when suspecting burnout, with confirmatory testing necessary as a second step.
   d. Two out of the three components must be present at any level for burnout to be considered.
6. Which of the following is true about identifying burnout?
   a. It necessitates a careful history and confirmatory testing, including specified scores on the Maslach Burnout Inventory (MBI) or similar questionnaire.
   b. It necessitates taking a careful history and ruling out a diagnosis with overlapping symptoms, such as adjustment disorder, anxiety, and depression.
   c. It necessitates a careful history, confirmatory testing — including specified scores on the MBI or similar questionnaire, and an increased morning cortisol level or similar measure of stress.
   d. It necessitates a careful history, an elevated screening test score, and clear signs of functional deterioration on the job, such as a decline in job performance.
7. Research supports that burnout is associated with which of the following?
   a. Peptic ulcer disease, migraines or chronic headache, and workplace violence
   b. Hypercholesterolemia, type 2 diabetes, and an increase in sick days or time off
   c. Hypercholesterolemia, migraines or chronic headache, and an increase in sick days or time off
   d. Type 2 diabetes, migraines or chronic headache, and workplace violence.
8. Although the diagnosis and treatment of burnout remains with ambiguities, which of the following is true?
   a. Completing controlled studies and defining essential terms are necessary before recommending an intervention.
   b. The potential harm from burnout makes a compelling case to recognize and intervene where possible.
   c. For the most part, the ambiguities are minor and easily overcome when adjusted for cultural differences.
   d. Until controlled studies are completed and essential terms defined, it is best to consider burnout a subsection of depression or anxiety and treat it accordingly.

CME INSTRUCTIONS

To earn credit for this activity, please follow these instructions:

1. Read and study the activity, using the references for further research.
2. Log onto ReliasMedia.com and click on My Account. First-time users will have to register on the site using the 8-digit subscriber number printed on the mailing label or invoice.
3. Pass the online test with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%. Tests are taken with each issue.
4. After completing the test, a credit letter will be emailed to you instantly.
5. Twice yearly after the test, your browser will be directed to an activity evaluation form, which must be completed to receive your credit letter.

PRIMARY CARE REPORTS™ (ISSN 1040-2497) is published monthly by Relias LLC, 1010 Sync St., Ste. 100, Morrisville, NC 27560-5468. Periodicals postage paid at Morrisville, NC, and additional mailing offices. POSTMASTER: Send address changes to *Primary Care Reports*, Relias LLC, 1010 Sync St., Ste. 100, Morrisville, NC 27560-5468.

Editor: Jason Schneider
Executive Editor: Shelly Mark
Editorial Group Manager: Leslie Coplin
Accreditations Director: Amy M. Johnson, MSN, RN, CPN

GST Registration No.: R128870672

Back issues: $26. Missing issues will be fulfilled by customer service free of charge when contacted within one month of the missing issue's date.

SUBSCRIBER INFORMATION

CUSTOMER SERVICE: (800) 688-2421

Customer Service Email Address:
customerservice@reliasmedia.com

Editorial Email Address:
jschneider@relias.com

Website:
ReliasMedia.com

MULTIPLE COPIES:
Discounts are available for group subscriptions, multiple copies, site-licenses, or electronic distribution. For pricing information,please contact our Group Account Managers at groups@reliasmedia.com or (866) 213-0844.

All prices U.S. only. U.S. possessions and Canada, add $30 plus applicable GST. Other international orders, add $30.

ACCREDITATION

Relias LLC is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Relias LLC designates this enduring material for a maximum of 3 *AMA PRA Category 1 Credits™*. Physicians should claim only credit commensurate with the extent of their participation in the activity.

The American Osteopathic Association has approved this continuing education activity for up to 2.5 AOA Category 2-B credits.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 3 MOC Medical Knowledge points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

This is an educational publication designed to present scientific information and opinion to health professionals, to stimulate thought, and further investigation. It does not provide advice regarding medical diagnosis or treatment for any individual case. It is not intended for use by the layman. Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. Clinical, legal, tax, and other comments are offered for general guidance only; professional counsel should be sought for specific situations.

This CME activity is intended for primary care and family practice physicians. It is in effect for 36 months from the date of the publication.

ABIM CME MOC ACCREDITED