The Shadow at the Intersection of the COVID-19 Pandemic and the Opioid Crisis

Be aware of these two simultaneous health issues.

BY ROBERT G. SMITH, DPM, MSC, RPH

Learning Objectives

Participants completing this course will be able to:

1) Explain how the negative economic impact response to COVID-19 can exacerbate the opioid crisis in America.

2) Identify and acknowledge certain factors of patients with substance abuse disorders who are compromised by excessive and prolonged isolation and social distancing.

3) Describe strategies for managing chronic pain and access to medical care.

Welcome to Podiatry Management's CME Instructional program. Podiatry Management Magazine is approved by the Council on Podiatric Medical Education as a provider of continuing education in podiatric medicine. Podiatry Management Magazine has approved this activity for a maximum of 1.5 continuing education contact hours. This CME activity is free from commercial bias and is under the overall management of Podiatry Management Magazine.

You may enroll: 1) on a per issue basis (at $29.00 per topic) or 2) per year, for the special rate of $249 (you save $41). You may submit the answer sheet, along with the other information requested, via mail, fax, or phone. You can also take this and other exams on the Internet at www.podiatrym.com/cme.

If you correctly answer seventy (70%) of the questions correctly, you will receive a certificate attesting to your earned credits. You will also receive a record of any incorrectly answered questions. If you score less than 70%, you can retake the test at no additional cost. A list of states currently honoring CPME approved credits is listed on pg. 144. Other than those entities currently accepting CPME-approved credit, Podiatry Management cannot guarantee that these CME credits will be acceptable by any state licensing agency, hospital, managed care organization or other entity. PM will, however, use its best efforts to ensure the widest acceptance of this program possible.

This instructional CME program is designed to supplement, NOT replace, existing CME seminars. *The goal of this program is to advance the knowledge of practicing podiatrists. We will endeavor to publish high quality manuscripts by noted authors and researchers. If you have any questions or comments about this program, you can write or call us at:* ***Program Management Services, P.O. Box 490, East Islip, NY 11730, (631) 563-1604 or e-mail us at bblock@podiatrym.com.***

*Following this article, an answer sheet and full set of instructions are provided (pg. 144).—**Editor***

Introduction

Boslet, et al. used a secondary data analysis of the universe of drug overdoses in 1999–2016 obtained from the National Center for Health Statistics. They detailed multiple cause of death records to demonstrate that the number of deaths attributed to opioid-related overdoses could be 28 percent higher than first reported due to incomplete death records.[1] This discrepancy was more pronounced in several states, including Alabama, Mississippi, Pennsylvania, Louisiana, and Indiana, where the estimated number of deaths more than doubles, obscuring the scope of the opioid crisis and potentially affecting programs and funding intended to confront the epidemic.[1]

Logistic regression and random forecast models were performed to determine contributing causes that substantially improved predictive accuracy, while including county characteristics. Using a superior prediction model, they found that 71.8% of unclassified drug overdoses in 1999–2016 involved opioids, thus translating into 99-160 additional opioid-related deaths, or approximately 28% more than previously reported.[1]

It is hoped that the podiatric physician relies on census data as essential tools for understanding the importance of place-level characteristics on opioid mortality. Opioid overdose and mortality rates overall are higher in counties characterized by

Continued on page 140

Opioid Crisis (from page 139)

more economic disadvantage, more blue-collar and service employment, and higher opioid-prescribing rates.[2]

Further, Monnat, et al. suggest national policies to combat the opioid and larger drug crises with emphasis on developing locally and regionally tailored interventions, and with attention to place-based structural economic and social characteristics.[2]

As of April 2020, the United States now has 22 million unemployed, wiping out a decade of job gains. Moreover, state tax revenues are plunging due to shelter-in-place orders and initiatives in place to have only essential workers attending their place of business. Additionally, the share of persons who have lost or left a job who lacked coverage was 22.1% versus 8.3% for employed persons—a difference of 13.8 percentage points.[3] These authors acknowledge that although the COVID-19 crisis demands urgent action, it also exposes the carelessness of tying health insurance to employment and the need for more thoroughgoing reform.[3] Woolhandler and Himmelstein assert that, with jobs and health insurance coverage disappearing as the COVID-19 pandemic rages, states that have declined to expand Medicaid should urgently reconsider.[3]

It is hoped that the issue of families who face the dual disaster of job loss and health insurance loss and who may suffer from opioid use disorder will be among the foremost issues on the legislative branch of the United States' agenda. Haffajee, et al., report opioid overdose deaths in the United States continue to increase, reflecting a growing need to treat those with opioid use disorder.[4]

Acknowledging that, fading economic opportunity has been hypothesized to be an important factor associated with the United States opioid overdose crisis. Automotive assembly plant closures are culturally significant events that substantially erode local economic opportunities.[5]

Moreover, Venkataramani, et al. explore and investigate the effect a community's economy has on opioid overdose mortality. Their primary outcome was the county-level age-adjusted opioid overdose mortality rate.[5] Their secondary outcomes included the overall drug overdose mortality rate and prescription vs. illicit drug overdose mortality rates.[5] They discovered that from 1999 to 2016, automotive assembly plant closures were associated with increases in opioid overdose mortality.[5]

These findings highlight the potential significance of eroding economic opportunity as a factor in the United States opioid overdose crisis.[5] Finally, Langbeer, et al., concluded that opioid-related morality was positively correlated with tobacco use, being a non-Hispanic or Caucasian individual, living in a rural area, obesity, being 65-years of age or older, and having a higher rate of unemployment.[6]

As people across the United States and the rest of the world contend with coronavirus disease 2019 (COVID-19), the medical community, including podiatric physicians, should realize the possibility that COVID-19 infection could hit some populations with substance use disorders (SUDs) particularly hard.[7] The coronavirus that causes COVID-19 attacks the lungs and could be an especially serious threat to those patients who smoke tobacco, marijuana, or who vape.

People with opioid use disorder (OUD) and methamphetamine use disorder may also be vulnerable due to those drugs' effects on respiratory and pulmonary health.[7] Additionally, patients with a substance use disorder are more likely to experience homelessness or incarceration than those in the general population, and these circumstances pose unique challenges regarding transmission of the virus that causes COVID-19. All these possibilities should be a focus of active surveillance as we work to understand this emerging health threat.[7]

According to Volkow, those persons who are isolated and stressed, as much of the population is during the COVID-19 pandemic, frequently turn to substances to alleviate their negative feelings.[8] Those in substance recovery will face stresses and heightened urges to use substances and will be at greatly increased risk for relapse.[8]

Further, vulnerable populations… those who smoke or vape, use opioids, or have a substance use disorder (SUD) may have direct challenges to respiratory health; those with SUD may be especially susceptible to infection by the virus that causes COVID-19 and associated complications.[8] Impediments to delivering care to this population, persons with SUD who develop COVID-19 may find it harder to get healthcare.[8]

Those in recovery will also be uniquely challenged by social distancing measures.[8] Lastly, a risk for severe COVID-19 and death escalates with older age but is also concentrated among those who are immunocompromised or have underlying health conditions, including diabetes, cancer, and heart and respiratory diseases.[8]

People with opioid use disorder (OUD) and methamphetamine use disorder may also be vulnerable due to those drugs' effects on respiratory and pulmonary health.

Mukherjee and El-Bassel report that people with opioid and other substance use disorders are disproportionately incarcerated, and recently released prisoners are ten times more likely to become homeless.[9] The COVID-19 pandemic, coupled without adequate planning for release from prison, may move people with opioid use disorder from one at-risk environment to another one.[9]

Upon release, the risks associated with COVID-19, as well as HIV, viral hepatitis, TB, overdose and homelessness that often accompany incarceration must be considered.[9]

It is an accepted fact that not only does COVID-19 make addiction services harder to access but people who use drugs may be at higher risk of infection given the dangerous overlap between addiction, incarcer-

Continued on page 141

Opioid Crisis (from page 140)

ation, and the rapid spread of infections within confined spaces.

Community campaigns to get nonviolent drug offenders released during this pandemic may not be sufficient to avoid incarcerated persons from becoming infected with COVID-19. A prisoner re-entry into regular society is difficult and dangerous from a health perspective, even during normal times. As the economy collapses, shelters and food banks have been overwhelmed, with already limited resources stretched thin on all levels in many communities.

Opioids and Increase of Infections

Schwetz, et al. rely on clinical evidence to assert in their commentary that the rise in Opioid Use Disorder (OUD), bolstered by injection opioid use, conveys numerous downstream consequences and is fueling a surge in infectious diseases, such as human immunodeficiency virus (HIV) infection with or without AIDS, the viral hepatitides, infective endocarditis, pneumonia, and skin and soft-tissue infections.[10,11]

Schwetz, et al. note that the increasing infection rates and demographic trends of bacterial and fungal infections appear to mirror trends observed with the opioid epidemic.

Further, Schwetz, et al. note that the increasing infection rates and demographic trends of bacterial and fungal infections appear to mirror trends observed with the opioid epidemic.[10,12] They cite that the example of the rate of methicillin-resistant Staphylococcus aureus infections among people who inject drugs more than doubled between the years of 2011 and 2016.[13]

Additionally, they assert that the growing evidence has shown that certain opioids, including both morphine and fentanyl, have putative effects on both the innate and adaptive immune systems, dependent on drug dosage and duration of delivery.[10] Finally, using published data, these authors concluded that the growing trend of infectious diseases emerging across the United States in areas with high rates of opioid use has created a significant combined impact on morbidity and mortality.[10]

Wiese, et al. conducted a retrospective cohort study to investigate long-acting opioid use and the risk of serious infections.[14] They used multivariable Poisson regression models to calculate adjusted incidence rate ratios and 95% confidence intervals to compare the infection risk among patients using long-acting opioids with known immunosuppressive properties (morphine, fentanyl, methadone) to the infection risk among patients using long-acting opioids without known immunosuppressive properties (oxycodone, oxymorphone, tramadol) accounting for demographics, opioid dose, comorbidities and pain conditions, medication use, frailty indicators, and healthcare encounter history using exposure propensity scores.[14]

Moreover, they compared users of individual long-acting opioids to long-acting morphine users, which is considered

Continued on page 142

TABLE 1:

Comparison List of the Typical Symptoms of COVID-19 Infection and Opioid Withdrawal Symptoms

COVID-19 Infection Symptoms	
Fever	87.9%
Dry Cough	67.7%
Fatigue	38.1%
Sputum Production	33.4%
Shortness of Breath	18.6%
Myalgia-Arthralgia	14.8%
Sore Throat	13.9%
Headache	13.6%
Chills	11.4%
Nausea-Vomiting	5.0%
Nasal Congestion	4.8%
Diarrhea	3.7%

Source: *Report of the WHO China Joint Mission on Coronavirus Disease 2019 20-Feb-20*

Opioid Withdrawal Symptoms Symptoms Appear 72 Hours After Last Dose
Fever
Chills
Body Aches
Diarrhea
Insomnia
Muscle Pain
Nausea
Dilated Pupils

Source: *National Institute of Drug Abuse*

Opioid Crisis (from page 141)

the prototypical immunosuppressive opioid.[14] They determined that the risk of serious infections among long-acting opioid users varies by opioid type.[14] They suggest that providers should carefully consider the risk of serious infections when making pain management decisions.[14]

Karagiannis, et al. acknowledge that chronic opioid usage not only causes addiction behavior through the central nervous system, but also modulates the peripheral immune system.[15] Further, they ask the question of how opioids impact the immune system and recognize it is still barely characterized systematically.[15] In order to understand the immune modulatory effect of opioids in an unbiased way, they perform single-cell RNA sequencing (scRNA-seq) of peripheral blood mononuclear cells from opioid-dependent individuals and controls to show that chronic opioid usage evokes widespread suppression of the antiviral gene program in naive monocytes, as well as in multiple immune cell types upon stimulation with the pathogen component lipopolysaccharide.[15]

Furthermore, scRNA-seq reveals the same phenomenon after a short in-vitro morphine treatment was started.[15] Their findings indicate that both acute and chronic opioid exposure may be harmful to our immune system by suppressing the antiviral gene program.[15] Lastly, their results suggest that further characterization of the immune modulatory effects of opioids is critical to ensure the safety of clinical opioids.[15] These results are of upmost importance in understanding the use of opioids during the current COVID-19 pandemic.

Strategies for Managing Chronic Pain

The COVID-19 public health crisis has strained healthcare systems, creating an enigma for patients, pain medicine practitioners, hospital leaders, and regulatory officials.[16] Pain management providers rely on infection control precautions from a backbone of interventional-based and some alternative medicine to include acupuncture and hands-on therapies such as massage and manual therapy practices.[16] These precautions are even more important during a pandemic where the potential exists for viral shedding from asymptomatic patients, and disease transmission.[16]

Podiatric physicians need to acknowledge that many patients who would be seen for chronic pain issues during the COVID-19 pandemic are in higher risk groups. Full consideration should be given to minimizing patients congregating in a waiting room. Podiatric physicians should familiarize themselves with the new Health and Human Services and Centers for Medicare and Medicaid Services waivers on telemedicine, providing a method for new patient and established patient visits.[16]

In patients on opioids who may have run out of medications because of logistical obstacles or overuse, assessment of withdrawal signs can be challenging during remote visits. Symptoms such as diarrhea, rhinorrhea, abdominal pain and chills can be garnered from patient interviews, but may be difficult to corroborate.[16] On the other hand, some physical signs indicative of opioid withdrawal, particularly if prominent, can be observed remotely, including agitation, diaphoresis, piloerection, and possibly even pupillary size.[16]

Monitoring patients for an elevated heart or pulse rate, which is a classic sign of opioid withdrawal, can sometimes be done by reliable patients or their caregivers.[16] The salient point that typical symptoms of COVID-19 overlap the typical symptoms of opioid withdrawal has to be realized by the podiatric physician so that a correct diagnosis can be determined and a negative outcome can be avoided. A list of the typical symptoms of COVID-19 infection along with the presenting typical symptoms of opioid withdrawal are presented in Table 1 so a comparison can be appreciated.[17,18]

Conclusion

First, the negative economic impact of the COVID-19 pandemic and how it exacerbates the opioid crisis in America was presented. Then certain factors of patients with substance abuse disorders and how they are disadvantaged by excessive and prolonged isolation and social distancing are presented. Lastly, strategies for managing chronic pain and access to medical care were presented. It is hoped that the podiatric physician can appreciate the over shadowed area at the intersection of the COVID-19 pandemic and the opioid crisis. **PM**

References

[1] Boslett AJ, Denham A, Hill EL. Using contributing causes of death improves prediction of opioid involvement in unclassified drug overdoses in US death records. Addiction 2020 115(7): 1308-1317.

[2] Monnat SM, Peters DJ, Berg MT, Hochstetler A. Using Census Data to Understand County-Level Differences in Overall Drug Mortality and Opioid-Related Mortality by Opioid Type. Am J Public Health. 2019;109(8):1084-1091.

[3] Woolhandler S, Himmelstein DU. Intersecting U.S. Epidemics: COVID-19 and Lack of Health Insurance [published online ahead of print, 2020 Apr 7]. Ann Intern Med. 2020; M20-1491. doi:10.7326/M20-1491.

[4] Haffajee RL, Lin LA, Bohnert ASB, Goldstick JE. Characteristics of US Counties with High Opioid Overdose Mortality and Low Capacity to Deliver Medications for Opioid Use Disorder. JAMA Netw Open. 2019;2(6): e196373.

[5] Venkataramani AS, Bair EF, O'Brien RL, Tsai AC. Association Between Automotive Assembly Plant Closures and Opioid Overdose Mortality in the United States: A Difference-in-Differences Analysis. JAMA Intern Med. 2019;180(2):254-262.

[6] Langabeer JR, Chambers KA, Cardenas-Turanzas M, Champagne-Langabeer T. County-level factors underlying opioid mortality in the United States [published online ahead of print, 2020 Mar 18]. Subst Abus. 2020;1-7.

[7] COVID-19: Potential Implications for Individuals with Substance Use Disorders. National Institute of Drug Abuse. Nora's Blog Volkow N. April 6, 2020. https://www.drugabuse.gov/about-nida/noras-blog/2020/04/covid-19-potential-implications-individuals-substance-use-disorders. Accessed June 27, 2020.

[8] Volkow ND. Collision of the COVID-19 and Addiction Epidemics [published online ahead of print, 2020 Apr 2]. Ann Intern Med. 2020; M20-1212.

[9] Mukherjee TI, El-Bassel N. The perfect storm: COVID-19, mass incarceration and the opioid epidemic [published online ahead of print, 2020 Jun 11]. Int J Drug Policy. 2020;102819.

[10] Schwetz TA, Calder T, Rosenthal E, Kattakuzhy S, Fauci AS. Opioids, and In-

Continued on page 143

Opioid Crisis *(from page 142)*

fectious Diseases: A Converging Public Health Crisis. J Infect Dis. 2019;220(3):346-349.

[11] Wiese AD, Griffin MR, Schaffner W, et al. Opioid Analgesic Use and Risk for Invasive Pneumococcal Diseases: A Nested Case-Control Study. Ann Intern Med. 2018;168(6):396-404.

[12] Ronan MV, Herzig SJ. Hospitalizations related to opioid abuse/dependence and associated serious infections increased sharply, 2002-12. Health Aff (Millwood) 2016; 35:832–837.

[13] Jackson KA, Bohm MK, Brooks JT, et al. Invasive methicillin-resistant Staphylococcus aureus infections among persons who inject drugs—six sites, 2005-2016. MMWR Morb Mortal Wkly Rep 2018; 67:625–628.

[14] Wiese AD, Griffin MR, Schaffner W, et al. Long-acting Opioid Use and the Risk of Serious Infections: A Retrospective Cohort Study. Clin Infect Dis. 2019;68(11):1862-1869.

[15] Karagiannis, T.T., Cleary, J.P., Gok, B. et al. Single cell transcriptomics reveals opioid usage evokes widespread suppression of antiviral gene program. Nat Commun 2020 11, 2611.

[16] Cohen SP, Baber ZB, Buvanendran A, et al. Pain Management Best Practices from Multispecialty Organizations during the COVID-19 Pandemic and Public Health Crises [published online ahead of print, 2020 Apr 7]. Pain Med. 2020; pnaa127.

[17] Aylward B. Liang W. The WHO-China joint mission of 25 national and international experts was held from 16-24 February 2020. https://www.who.int/publications/i/item/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-(covid-19)#:~:text=References%20are%20available%20for%20any%20information%20in%20this,Wannian%20Liang%20of%20the%20People%E2%80%99s%20Republic%20of%20China. Accessed June 28, 2020.

[18] Drug Withdrawal Symptoms. https://drugabuse.com/drug-withdrawal/#:~:text=On%20its%20website%2C%20the%20National%20Institute%20of%20Drug,being%20suppressed%20by%20the%20drug%20to%20begin%20with. Accessed June 28, 2020.

Dr. Smith is in private practice in Ormond Beach, FL.

CME EXAMINATION

SEE ANSWER SHEET ON PAGE 145.

1) Identify the symptom that may appear with both opioid withdrawal and COVID-19 infection.

- **A) Weight Gain**
- **B) Increase Muscle Tone**
- **C) Increase Hunger**
- **D) Fever**

2) scRNA-seq reveals the same phenomenon after a short in vitro _____ treatment was discovered

- **A) Oxycodone**
- **B) Morphine**
- **C) Oxymorphone**
- **D) Dihydromophone**

3) Boslet, et al. use a superior prediction model. They found that 71.8% of unclassified drug overdoses in 1999–2016 involved opioids, thus translating into 99-160 additional opioid-related deaths, or approximately _____ more than previously reported.

- **A) 12%**
- **B) 18%**
- **C) 17%**
- **D) 28%**

4) Long-acting opioids with known immunosuppressive properties include all but this one agent.

- **A) Methadone**
- **B) Fentanyl**
- **C) Oxycodone**
- **D) Morphine**

5) Woolhandler and Himmelstein assert with jobs and health insurance coverage disappearing as the COVID-19 pandemic rages, states that have declined to expand _____ should urgently reconsider.

- **A) Private Health Insurance**
- **B) Medicare**
- **C) Global Health Insurance**
- **D) Medicaid**

6) _____ conducted a retrospective cohort study to investigate long-acting opioid use and the risk of serious infections

- **A) Marks et al.**
- **B) Wiese et al.**
- **C) Smith et al.**
- **D) Block et al.**

Continued on page 144

7) Schwetz, et al. note that the increasing infection rates and demographic trends of bacterial and _____ infections appear to mirror trends observed with the opioid epidemic.

A) Viral
B) Protozoa
C) Parasitic
D) Fungal

8) Identify the correct percentage with its corresponding symptom.

A) Fever 87.9%
B) Dry Cough 100%
C) Nausea and Vomiting 25%
D) Chills 96%

9) Karagiannis, et al acknowledge that chronic opioid usage not only causes addiction behavior through the central nervous system, but also modulates the _____ system.

A) peripheral circulation
B) peripheral neurological
C) peripheral immune
D) peripheral clotting

10) Vulnerable populations, those who _____ or have a substance use disorder (SUD), may have direct challenges to respiratory health.

A) Smoke
B) Vape
C) Use Opioids
D) All answers are correct

SEE ANSWER SHEET ON PAGE 145.

The author(s) certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge, or beliefs) in the subject matter or materials discussed in this manuscript.

PM's CME Program

Welcome to the innovative Continuing Education Program brought to you by *Podiatry Management Magazine.* Our journal has been approved as a sponsor of Continuing Medical Education by the Council on Podiatric Medical Education.

Now it's even easier and more convenient to enroll in PM's CE program!

You can now enroll at any time during the year and submit eligible exams at any time during your enrollment period.

CME articles and examination questions from past issues of *Podiatry Management* can be found on the Internet at http://www.podiatrym.com/cme. Each lesson is approved for 1.5 hours continuing education contact hours. Please read the testing, grading and payment instructions to decide which method of participation is best for you.

Please call (631) 563-1604 if you have any questions. A personal operator will be happy to assist you.

Each of the 10 lessons will count as 1.5 credits; thus a maximum of 15 CME credits may be earned during any 12-month period. You may select any 10 in a 24-month period.

The* Podiatry Management Magazine *CME program is approved by the Council on Podiatric Education in all states where credits in instructional media are accepted. This article is approved for 1.5 Continuing Education Contact Hours (or 0.15 CEU's) for each examination successfully completed.

PM's privacy policy can be found at http://podiatrym.com/privacy.cfm.

This CME is valid for CPME-approved credits for three (3) years from the date of publication.

Enrollment/Testing Information and Answer Sheet

Continuing Medical Education

Note: If you are mailing your answer sheet, you must complete all info. on the front and back of this page and mail with your credit card information to: **Program Management Services, P.O. Box 490, East Islip, NY 11730.**

TESTING, GRADING AND PAYMENT INSTRUCTIONS

(1) Each participant achieving a passing grade of 70% or higher on any examination will receive an official computer form stating the number of CE credits earned. This form should be safeguarded and may be used as documentation of credits earned.

(2) Participants receiving a failing grade on any exam will be notified and permitted to take one re-examination at no extra cost.

(3) All answers should be recorded on the answer form below. For each question, decide which choice is the best answer, and circle the letter representing your choice.

(4) Complete all other information on the front and back of this page.

(5) Choose one out of the 3 options for testgrading: mail-in, fax, or phone. To select the type of service that best suits your needs, please read the following section, "Test Grading Options".

TEST GRADING OPTIONS

Mail-In Grading

To receive your CME certificate, complete all information and mail with your credit card information to: **Program Management Services, P.O. Box 490, East Islip, NY 11730. PLEASE DO NOT SEND WITH SIGNATURE REQUIRED, AS THESE WILL NOT BE ACCEPTED.**

There is **no charge** for the mail-in service if you have already enrolled in the annual exam CME program, and we receive this exam during your current enrollment period. If you are not enrolled, please send $29.00 per exam, or $249 to cover all 10 exams (thus saving $41 over the cost of 10 individual exam fees).

Facsimile Grading

To receive your CME certificate, complete all information and fax 24 hours a day to 1631-532-1964. Your CME certificate will be dated and mailed within 48 hours. This service is available for $2.95 per exam if you are currently enrolled in the annual 10-exam CME program (and this exam falls within your enrollment period), and can be charged to your Visa, MasterCard, or American Express.

If you are *not* enrolled in the annual 10-exam CME program, the fee is $29 per exam.

Phone-In Grading

You may also complete your exam by using the toll-free service. Call 1-800-232-4422 from 10 a.m. to 5 p.m. EST, Monday through Friday. Your CME certificate will be dated the same day you call and mailed within 48 hours. There is a $2.95 charge for this service if you are currently enrolled in the annual 10-exam CME program (and this exam falls within your enrollment period), and this fee can be charged to your Visa, Mastercard, American Express, or Discover. If you are not currently enrolled, the fee is $29 per exam. When you call, please have ready:

1. Program number (Month and Year)
2. The answers to the test
3. Credit card information

In the event you require additional CME information, please contact PMS, Inc., at **1-631-563-1604**.

ENROLLMENT FORM & ANSWER SHEET

Please print clearly...Certificate will be issued from information below.

Name _____ Email Address _____
Please Print: FIRST MI LAST

Address _____

City _____ State _____ Zip _____

Charge to: _____Visa _____ MasterCard _____ American Express

Card # _____ Exp. Date _____ Zip for credit card _____

Note: Credit card is the only method of payment. Checks are no longer accepted.

Signature _____ Email Address _____ Daytime Phone _____

State License(s) _____ Is this a new address? Yes _____ No _____

Check one:

_____ I am currently enrolled. (If faxing or phoning in your answer form please note that $2.95 will be charged to your credit card.)

_____ I am not enrolled. Enclosed is my credit card information. Please charge my credit card $29.00 for each exam submitted. (plus $2.95 for each exam if submitting by fax or phone).

_____ I am not enrolled and I wish to enroll for 10 courses at $249.00 (thus saving me $41 over the cost of 10 individual exam fees). I understand there will be an additional fee of $2.95 for any exam I wish to submit via fax or phone.

Over, please

ENROLLMENT FORM & ANSWER SHEET *(continued)*

EXAM #8/20
The Shadow at the Intersection of the COVID-19 Pandemic and the Opioid Crisis (Smith)

Circle:

1.	A	B	C	D	6.	A	B	C	D
2.	A	B	C	D	7.	A	B	C	D
3.	A	B	C	D	8.	A	B	C	D
4.	A	B	C	D	9.	A	B	C	D
5.	A	B	C	D	10.	A	B	C	D

Medical Education Lesson Evaluation

Strongly agree [5]	Agree [4]	Neutral [3]	Disagree [2]	Strongly disagree [1]

1) This CME lesson was helpful to my practice ____

2) The educational objectives were accomplished ____

3) I will apply the knowledge I learned from this lesson ____

4) I will makes changes in my practice behavior based on this lesson ____

5) This lesson presented quality information with adequate current references ____

6) What overall grade would you assign this lesson?

A B C D

7) This activity was balanced and free of commercial bias.

Yes _____ No _____

8) What overall grade would you assign to the overall management of this activity?

A B C D

How long did it take you to complete this lesson?

_____hour _____minutes

What topics would you like to see in future CME lessons ? Please list :

_____

_____

_____

_____

_____