

TARGET AUDIENCE

This activity has been designed to meet the educational needs of recertifying MROs within Federally Regulated (DOT 49 CFR Part 40) and non-regulated drug testing programs.

STATEMENT OF NEED

Today, physicians in many specialties conduct drug and alcohol tests for business, industry, government agencies, and schools. The need for trained medical review officers (MROs) to evaluate test results extends to more than 20 million Americans. The Drug-Free Workplace Act affects all federal agencies. Mandatory alcohol and drug testing is now required of all intrastate truckers, commercial driver's license holders, and other transportation workers. In joint government agreements, the United States, Canada, and Mexico also monitor truckers crossing international borders. More than 60 percent of large private employers require drug and alcohol testing.

In order to help ensure a level of standards, the DOT requires that all Medical Review Officers who evaluate federally-mandated drug test results attend an initial MRO training course and, subsequently, that these MROs be certified through a written examination. Beyond the initial training and certification, MROs are required to be retrained and recertified every five years.

The CME credits from this activity will fulfill both DOT requirements for retraining and MROCC recertification prerequisite requirements.

This educational activity will provide the latest information related to the drug testing procedures issued by the DOT and the Substance Abuse and Mental Health Services Administration.

EDUCATIONAL OBJECTIVES

Upon completion of this educational activity, learners should be able to:

- ✓ Interpret workplace drug test results, interview donors, obtain corroborating information, and report findings to employers.
- ✓ Help employers and workers understand the return-to-duty process after a testing program violation.
- ✓ Recognize the advantages and disadvantages of non-urine specimens that can be used for drug and alcohol testing.
- ✓ Help employers develop testing programs that are effective and comply with relevant federal regulations, e.g., DOT.

This CME activity is intended for physicians with an interest and/or responsibility in providing or monitoring workplace alcohol and drug testing programs. This activity is designed to meet the continuing education requirements of the U.S. Department of Transportation Part 40 Procedures.

ACCREDITATION/CREDIT DESIGNATION STATEMENT

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Pennsylvania Medical Society and the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of University Services and MROCC. University Services is accredited by the Pennsylvania Medical Society to provide continuing medical education for physicians. **University Services designates this educational activity for a maximum of 15 credit hours, AMA PRA Category 1 Credits™.** Physicians should only claim credit commensurate with the extent of their participation in the educational activity.

The American Board of Preventive Medicine (ABPM) has designated this activity for a maximum of 15 MOC credit hours.

MRO MANUAL - fourth edition



SELF-ASSESSMENT CME ACTIVITY

~~(maximum 15 CME credit hours)~~

Medical Review Officer Certification Council

This activity is based on The Medical Review Officer's Manual: MROCC's Guide To Drug Testing, 4th edition, and is intended for MROs who wish to fulfill CME updating requirements but are not seeking to recertify MRO credentials at this time. MROCC offers a separate CME activity for physicians requiring CME credit along with MRO recertification.

- **Faculty and all others** who have the ability to control the content of continuing medical education activities sponsored by University Services are expected to disclose to the audience whether they do or do not have any real or apparent conflict of interest or other relationships related to the content of their presentation(s). Neither Dr. Swotinsky nor Dr. Smith plan to present any unapproved/investigative uses of commercial products or devices, and have no actual or potential conflict of interest in relation to this program.

-**The Planning Committee** has no real or apparent conflict of interest(s) or other relationships related to the content of this activity.

-There has been no commercial support for this activity

PRINCIPLE FACULTY

Robert Swotinsky, MD is chair of Fallon Clinic's Occupational Medicine Department in Massachusetts, is board certified in occupational medicine, is certified as a medical review officer (MRO) and substance abuse professional (SAP), and is an aviation medical examiner. He is also founding editor of the MRO Update newsletter, is a coauthor of the Medical Review Officer Certification Council's (MROCC) MRO certification examination, and teaches in national courses for MROs.

Donna Smith, PHD is Regulatory Affairs and Program Development Officer at FirstLab in North Wales, Pennsylvania. Dr. Smith previously served as the Acting Director, Drug Enforcement and Program Compliance, for the U.S. Department of Transportation (DOT) in Washington, D.C. She coordinated the development, implementation, and enforcement of DOT's workplace drug and alcohol testing programs. She was a principal author of the DOT drug and alcohol testing regulations and numerous government publications on drug and alcohol testing procedures. Dr. Smith has provided testimony and statements as an expert witness on behalf of the DOT and HHS procedures for workplace drug testing. Dr. Smith has taught collectors, MROs, and other service agents in training programs throughout the United States and abroad.

Send completed activity and payment to MROCC using address/fax below

METHOD OF PARTICIPATION

This activity is based on *The Medical Review Officer's Manual: MROCC's Guide to Drug Testing, 4th edition* available for purchase from the publisher – OEM Press – at (800) 533-8046 or www.oempress.com

To receive credit for this activity the participant must:

1. Read *The Medical Review Officer's Manual: MROCC's Guide to Drug Testing, 4th edition*
2. Complete and return to MROCC:
 - a. the CME activity evaluation form
 - b. the activity score sheet showing your answers
 - c. the payment method form at bottom of this sheet
 - d. fax or mail to MROCC – see bottom of sheet

The cost of this activity is \$275 for a maximum of 15 CME credit hours.

3. CME activities are processed at the end of each month. At that time, a CME certificate will be **EMAILED** from University Services (CME provider)

University Services
10551 Decatur Road Suite 200
Philadelphia, PA 19154
Phone: (215) 637-6800 | Toll Free: (800) 624-3784
Fax: (215) 637-6328 | cme@userservices.com

4. The estimated time to complete this educational activity is 15 hours.
5. This activity expires on June 15, 2013. Materials received after that date will be returned with payment.

METHOD OF PAYMENT

The cost of this 15 CME activity is **\$275.00** (includes processing of activity and **emailing** of CME award directly from University Services, the CME provider. Do not send this activity to University Services. The certificate will be **emailed** to you - please make sure to include a valid email address.

CHOOSE EITHER:

_____ I am paying with an enclosed check. Please make check payable to **Medical Review Officer Certification Council**

_____ I am paying with my credit card: _____VISA _____MASTERCARD _____AMERICAN EXPRESS _____DISCOVER

Credit Card Number: _____ Expiration: _____/_____

Credit Card Security Code: _____ (this is the last 3 digit number on the back of Visa, MasterCard & Discover cards OR the four digit number on the front of the American Express card)

By signing and dating below I understand and agree that my credit card will be charged \$275.00

Signature: _____ Date: _____

Send completed activity and payment to: MROCC 836 Arlington Heights Rd., #327, Elk Grove Village, IL 60007 or fax to 847.483.1282



University Services
Office of Continuing Medical Education

Activity Evaluation Form

This form may be completed using your computer keyboard. Please complete in full and print.

Title of CME Program: **Medical Review Officer, 4th Edition with Self-Assessment Activity**

Author: **Robert Swotinsky, MD & Donna Smith, PhD**

Date Completed: _____

Name/Degree: _____

Company: _____

Address: _____

Address 2: _____

City: _____ State: _____ Zip: _____

Country: _____

Email Address (certificate will be emailed): _____

Phone Number: _____

Drs. Swotinsky & Smith completed and signed the University Services faculty disclosure form. Was this disclosure provided in the program material? Yes No

Please rate your knowledge level of the topic presented:

Knowledge Level	None	Some	High	Very High
Before Program				
After Program				

Were the following educational objectives met?

<i>Upon completion of this program, the participant should be able to:</i>	Yes	No
Outline procedures in interpreting workplace drug test results, interviewing donors, obtain corroborating information, and report findings to employers.		
Demonstrate to employers and workers the return-to-duty process after a violation in testing program.		
Summarize the advantages and disadvantages of non-urine specimens that can be used for drug and alcohol testing.		
Demonstrate to the employers the process of developing testing programs that are effective and comply with relevant federal regulations, e.g., DOT.		

What knowledge, competency, or skill was learned from this activity?

How likely is it that you will implement the knowledge, competency, or skill learned from this activity in your practice?

Do you intend to make a MRO practice change as a result of this program? Yes No

If so, what changes do you intend to make?

Please rate the activity: (5=Excellent, 1=Poor)

	5	4	3	2	1
Timely, up-to-date content					
Provided appropriate details; was neither superficial nor overly focused					
Presented content that was appropriate for my level of knowledge					

Did you perceive any commercial bias?

Yes

No

List any topics you would like presented in the future:

Thank you for taking the time to complete this evaluation form. Your certificate will be sent to you soon.

This CME activity is provided through the joint sponsorship of University Services and Medical Review Officer Certification Council (MROCC).

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Education (ACCME) by the Pennsylvania Medical Society. University Services is accredited by the Pennsylvania Medical Society to provide continuing medical education for physicians.

University Services designates this educational activity for a maximum of **15** AMA PRA Category 1 Credit(s)TM. Physicians should only claim credit commensurate with the extent of their participation in the educational activity.

I certify my actual hours spent to complete this activity to be _____ hours and _____ minutes.

Signature required for CME credit

Date

Print Name

The American Board of Preventive Medicine (ABPM) has designated this activity for a maximum of 15 Maintenance of Certification (MOC) credit hours. If you are claiming MOC credit please so indicate below.

MOC credit is only for physicians board-certified in Occupational Medicine and who are subject to ABPM requirements.

I am claiming _____ hours and _____ minutes for this MOC distance learning activity (course ID 760-765)

Submit CME activity and payment to MROCC:

836 Arlington Heights Rd, #327, Elk Grove Village, IL 60007
(Tel) 847.631.0599 | (fax) 847.483.1282 | mrocc@mrocc.org

Do not send to University Services

SELF ASSESSMENT ACTIVITY

Use the score sheet at the end of this activity to record your answers.

The score sheet must be submitted along with the evaluation form and payment to receive credit.

Chapter 1 – The Medical Review Officer (MRO)

1.1 Federal regulators require that only physicians serve as MROs. This is because physicians: (choose one)

- A. Are designated to receive clinical laboratory results by medical practice acts.
- B. Are trained to recognize substance abuse.
- C. Can refer drug abusers to treatment.
- D. Have the relevant skills, credibility, and integrity.

1.2 Under DOT regulations, MRO qualification requirements include:

- 1. Training
- 2. Medical license
- 3. Knowledge about substance abuse disorders, DOT rules and guidelines, and specimen validity testing
- 4. Successful completion of an exam by a nationally recognized MRO certification board

Which of the above statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

1.3 Which of the following tasks are appropriate for the MRO assistant?

- 1. Receive and collate test records and review them for completeness
- 2. Help arrange contact between donors and the MRO
- 3. Corroborate medical explanation(s) after donors have spoken with the MRO
- 4. Report negative and non-negative test results

In federally regulated programs, which of these tasks are appropriate for MRO assistants?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

Chapter 2 – Laws, Guidelines, and Policies

2.1 The Americans With Disabilities Act (ADA) prohibits employers from: (choose one)

- A. Testing applicants for drugs prior to making a job offer.
- B. Asking applicants if they have a history of substance abuse prior to making a job offer.
- C. Testing applicants for alcohol after making a job offer.
- D. Asking applicants if they have a history of substance abuse after making a job offer.

2.2 Provisions in some state workplace drug testing laws include:

- 1. Denial of unemployment benefits for those fired due to positive tests.
- 2. Denial of workers' compensation benefits for those with positive post-accident tests
- 3. Criminalization of attempts to adulterate or substitute drug test specimens
- 4. Superseding of state law over any conflicting federal law

Which of the above statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

2.3 Which of the following agency drug testing rules require use of laboratories certified by the Department of Health and Human Services? (choose one)

- A. Nuclear Regulatory Commission
- B. U.S. Department of Transportation
- C. Agency programs that test federal employees
- D. All of the above

Chapter 3 – Test Types

3.1 A DOT-covered driver was injured at work at 7 pm and was not tested that night. The employer learns of the accident the next morning. DOT requires that the employer document why the driver was not tested, and do which of the following? (choose one)

- A. Do *not* test the driver.
- B. Test the driver for drugs and alcohol.
- C. Test the driver for drugs, only.
- D. Remove the driver from safety-sensitive duties and refer him/her to a substance abuse professional

3.2 What type of testing has the highest rate of positive results? (choose one)

- A. Pre-employment
- B. Reasonable suspicion/cause
- C. Post-accident
- D. Random

3.3 A FMCSA-regulated motor carrier tests randomly selected groups of employees rather than selecting employees for testing one at a time. The motor carrier notifies the selected group of employees on the first Monday of each month. All employees are selected for drugs and alcohol. Anyone in the group who is unavailable is put in next month's selection group. To recap:

1. Selected employees get both drug and alcohol tests.
2. The motor carrier selects employees in groups
3. Those who are unavailable are deferred to the next month.
4. Tests are performed on the first Monday of each month

Which of these program elements are acceptable?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are acceptable

Chapter 4 – Employer Responsibilities

4.1 An employee's random DOT test is positive. The employer should:

1. Remove the employee from safety-sensitive duties.
2. Have the split specimen tested.
3. Provide the employee with a list of substance abuse professionals
4. Retest the employee under direct observation if the split fails to confirm.

(4.1) Which of the above statements are correct?

- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

4.2 An employer sends anyone who tests positive for a second test. Why is this a bad policy? (choose one)

- A. The second test will probably also be positive.
- B. The donor may tamper with the second test.
- C. This undermines the testing program
- D. Federal drug testing do not authorize retesting the donor after a positive result.

4.3 How long must DOT-covered employers keep reports of negative results? Positive results? (choose one)

	Negatives	Positives
A.	Promptly discard	Promptly discard
B.	Promptly discard	1 year
C.	1 year	1 year
D.	1 year	5 years

Chapter 5 – Service Agents

5.1 If a collection site is managed by a third party administrator (TPA) who violates the DOT rules, whom can DOT hold accountable? (choose one)

- A. The collection site.
- B. The TPA.
- C. The employer.
- D. Any and all of the above.

5.2 What is the difference between a consortium and a TPA? (choose one)

- A. No difference – they are the same.
- B. Consortia are non-profit. TPAs are for-profit
- C. Consortia provide few services. TPAs offer many services
- D. A consortium is a group of employers. A TPA is a company that coordinates services for employers.

5.3 Split specimen tests cost more than standard confirmation tests because:

1. They require special handling by the laboratories
2. They are tested to the limit of detection
3. They entail additional shipping costs
4. The higher price is intended to discourage donors from ordering them

(5.3) Which of the above statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

Chapter 6 – Specimen Collection

6.1 Employers should minimize the interval between telling a donor to go to the collection/test site and that donor's actual arrival at the site because:

- 1. The donor could obtain an adulterant
- 2. The donor could drink a lot of water and produce a dilute specimen
- 3. Concentrations of alcohol and some drugs decrease over time and may fall below the cutoff(s)
- 4. The donor could perform safety-sensitive duties prior to testing

Which of the above statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

6.2 An MRO is reviewing a DOT follow-up drug test and sees no notation about collection under direct observation. The MRO should: (choose one)

- A. Finish the review. No further testing is required.
- B. Finish the review and direct the employer to promptly send the donor for an observed collection.
- C. Ask for a corrective statement because this is a correctable flaw.
- D. Cancel the test.

6.3 A donor is entitled to at least three hours to provide a sufficient volume urine specimen. When does that three-hour clock begin? (choose one)

- A. Upon the donor's arrival at the collection site.
- B. Upon presenting the donor with a specimen cup.
- C. Upon the donor's first failure to provide a sufficient volume specimen.
- D. With the donor's last attempt to provide a sufficient volume specimen.

Chapter 7 - Adulterants, Substitution, and Dilution

7.1 Which of the following is a normal constituents of urine? (choose one)

- A. Chromium VI
- B. Glutaraldehyde
- C. Nitrite
- D. Peroxidase

7.2 How do drug "detox" pills help users test negative on drug tests? (choose one)

- A. They are consumed with large volumes of fluids, thereby diluting urine.
- B. They oxidize drugs/metabolites in the body.
- C. They alter urine pH.
- D. They mask the presence of drugs/metabolites in the urine.

7.3 Oxidizing adulterants have their greatest effect on: (choose one)

- A. Amphetamines
- B. Cocaine
- C. Marijuana
- D. Phencyclidine

Chapter 8 - Laboratory Analysis

8.1 Immunoassays for which drug(s)/metabolite(s) have the lowest confirmation rates? The highest? (choose one)

LOWEST/HIGHEST

- A. Cocaine/Amphetamines
- B. Opiates/Amphetamines
- C. Opiates/Cocaine
- D. Marijuana/Cocaine

8.2 In comparison to single mass spectrometry (MS) what is the advantage of tandem MS (MS/MS)? (choose one)

- A. Greater sensitivity/lower cutoffs
- B. Greater specificity/greater accuracy
- C. Eliminates need for screening tests
- D. Faster assays

8.3 Which of the following drugs is detected in hair and oral fluid at concentrations much lower than other drugs? (choose one)

- A. Amphetamines
- B. Cocaine
- C. Marijuana
- D. Opiates

Chapter 9 - Laboratory Results

9.1 The laboratory reports an "invalid result" if the specimen:

1. Contains an unidentified oxidizing agent
2. Contains an interfering substance, e.g., Cipro®
3. Has specific gravity and creatinine values consistent with saline
4. Appears likely to damage the laboratory's instrumentation if it undergoes testing

Which of these statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

9.2 If the laboratory result is positive for Drug X but the laboratory cannot complete the other drug assays because of the specimen's condition, the laboratory report states: (choose one)

- A. Invalid
- B. Rejected for testing
- C. Positive for Drug X (only)
- D. Positive for Drug X, Invalid for the other assays

9.3 Which of the following laboratory reports establishes that the specimen met criteria for either adulteration or substitution? (choose one)

- A. Dilute
- B. Invalid
- C. Rejected for testing
- D. Positive for <Drug X> and Adulterated with <Adulterant Y>

Chapter 10 - MRO Review of Drug Test Results

10.1 Under the DOT rule, how soon must the MRO start trying to reach the donor after receiving a positive test result? (choose one)

- A. The same day as receipt of the record
- B. Within 24 hours of receipt of the test record
- C. Within 5 days of receipt of the test record
- D. DOT does not address this

10.2 Approaches to avoiding positive results from passive exposure include:

1. Testing for drug metabolites
2. Using industry standard cutoffs
3. For hair, washing the specimen prior to analysis
4. For oral fluid, waiting at least 30-60 minutes between employee notification and specimen collection

(10.2) Which of the above statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

10.3 Which of the following prescription medicine uses should an MRO consider legitimate for purposes of downgrading a positive result?

1. Use of one's 5-month old prescription
2. Use of a prescription drug purchased abroad 3 years ago
3. Use of a medicine prescribed by one's physician and purchased over the Internet
4. Use of medicine borrowed from a friend

Which of these uses are legitimate?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

Chapter 11 - Split Specimen Tests and Retests

11.1 Which of the following is a rare explanation for a split specimen failure to reconfirm? (choose one)

- A. Presence of slow acting adulterant
- B. Split specimen does not meet substituted criteria
- C. Absence of a suitable split specimen
- D. Primary result was false positive for drug/metabolite

11.2 If the donor asks for a split specimen test but Bottle B is unavailable, the MRO reports that both tests are cancelled. Under DOT regulations, what else does the MRO tell the employer? (choose one)

- A. Retest the donor immediately, not under direct observation
- B. Retest the donor immediately, under direct observation
- C. Retest the donor only if a negative result is required, e.g., for pre-employment or return to duty
- D. Nothing else – DOT authorizes no retest

11.3 Split specimens are tested to the limit of detection instead of applying the cutoff. The reasons for this include possibilities of:

1. Laboratory imprecision
2. Degradation of drugs/metabolites during storage
3. Continuing action of adulterants on drugs/metabolites
4. Reduced concentration due to metabolism

Which of these statements are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

Chapter 12 - Urine and Other Specimens

12.1 Which of the following specimens has the shortest detection time? (choose one)

- A. Urine
- B. Blood
- C. Oral fluid
- D. Urine

12.2 "Mike is acting crazy today. He is more agitated and argumentative than I have ever seen him before. . ." The employer wants to send Mike for a reasonable suspicion drug test. Testing of which of the following specimen(s) can offer useful information in this situation?

- 1. Urine
- 2. Blood
- 3. Oral fluid
- 4. Hair

Which of the above are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

12.3 DOT authorizes employers to use post-accident blood test results for drugs/alcohol in which of the following circumstances?

- 1. Investigations of railroad accidents
- 2. Tests ordered by hospital personnel
- 3. Tests conducted by local police
- 4. If the donor consents

Which of the above are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

Chapter 13 - Alcohol and Specific Drugs

13.1 MDA and MDMA:

- 1. Are in the class of drugs known as amphetamines.
- 2. Are found in urine briefly and at low concentrations after use.
- 3. Have no legitimate medical use.
- 4. Are metabolized to amphetamine and methamphetamine

Which of the above are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

13.2 Consider these proposed metabolic transformations of opioids.

- 1. Codeine to hydrocodone.
- 2. Morphine to hydromorphone
- 3. Oxycodone to oxymorphone
- 4. Heroin to morphine

Which of the above are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

13.3 Standard opiate immunoassays are targeted to either morphine (usually) or codeine (less often). They also have significant cross reactivity to semi-synthetic opioids, but less cross reactivity to fully synthetic opioids. Effective testing for which of the following opioids requires use of immunoassays specific for those drugs?

- 1. fentanyl
- 2. methadone
- 3. oxycodone
- 4. hydrocodone

Which of the above are correct?

- A. 1, 2, and 3 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. All are correct

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