

## Let's Take It One CYP At A Time: Unraveling the Role of CYP2B6 in Methadone Metabolism

**Session Date:** 04/19/2022

**Session Time:** 11:00 – 11:45 AM (CST)

### Target Audience

This continuing education (CE) session was planned to meet the needs of professional staff who deal with the selection and monitoring of medication(s) as part of their patient care duties, including pharmacists, RNs, APRNs, PAs, MDs.

### Activity Overview

The clearance of methadone, a long-acting opioid is associated with substantial interindividual variability. Accumulation can lead to sedation, respiratory depression, and even death. Many cytochrome P450 (CYP) enzymes are involved in the metabolism of methadone. Single-nucleotide polymorphisms (SNPs) in CYP enzymes have been shown to be a significant factor for the interindividual variability seen with methadone. Recent studies suggest that variants within the CYP2B6 gene impacts methadone clearance. This presentation will review available evidence on CYP2B6's role in the metabolism of methadone.

### Learning Objectives

At the conclusion of this knowledge-based CE session, participants should be able to:

1. Describe the pharmacodynamics and pharmacokinetics of methadone
2. Identify and discuss clinical practice guidelines for the safe use of methadone
3. Evaluate evidence for CYP2B6-guided methadone use

### Faculty Information

Dimple R. Dhakal, PharmD  
PGY2 Clinical Pharmacogenomics Pharmacy Resident  
Mayo Clinic Hospital - Rochester, MN

Dimple received her Doctor of Pharmacy degree from the University of Georgia in Athens, GA and completed a PGY-1 Pharmacy Residency at Marshfield Clinic Health System in Marshfield, Wisconsin. She is the current PGY2 Clinical Pharmacogenomics Pharmacy Resident at Mayo Clinic. Her practice interests include chronic disease state management and application of pharmacogenomics in pain management.



## Approved Provider Statement



JOINT ACCREDITATION™  
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, this activity is planned and implemented by Mayo Clinic College of Medicine and Science. Mayo Clinic College of Medicine and Science is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

### Credit Statements

#### AMA

Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 0.75 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### ACPE



**ACPE Universal Activity Number (UAN):** JA0000238-0000-22-139-L01-P

Mayo Clinic College of Medicine and Science designates this educational activity for a maximum of 0.75 ACPE Knowledge-based contact hours. Participants should claim only the credit commensurate with the extent of their participation in the activity

#### ANCC

Mayo Clinic College of Medicine and Science designates this activity for a maximum of 0.75 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.

#### AAPA



Mayo Clinic College of Medicine and Science has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 0.75 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

## Educational Format and CE Requirements

This CE session is available as a live presentation, including live webcast.

Participants must complete the following to record attendance and obtain CE credit:

1. Attend the entire session.
2. Text the session code to 507-200-3010 within 48 hours of the live presentation to record attendance.
  - a. This number is only used for receiving text messages related to tracking attendance
  - b. Employees are encouraged to create a contact in their mobile phone, as the same number is used to record attendance for every session
3. Complete the online evaluation for the respective session within 2 weeks of live presentation.

Pharmacist CE credit is electronically transferred to the National Association of Boards of Pharmacy CPE Monitor. To track CE, please go to [NABP CPE Monitor](#).

Non-pharmacist attendees can print out a record of attendance at [ce.mayo.edu](https://ce.mayo.edu) after completing the evaluation and claiming credit.

Live attendance: Rochester, Saint Mary's Campus, ALF\_MN\_459

Live virtual attendance via [Zoom link](#)

## Disclosure Summary

As a provider accredited by Joint Accreditation Interprofessional Continuing Education, Mayo Clinic College of Medicine and Science (Mayo Clinic School of CPD) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course Director(s), Planning Committee Members, Faculty, and all others who are in a position to control the content of this educational activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of these relevant financial relationships will be published in activity materials so those participants in the activity may formulate their own judgments regarding the presentation.

Listed below are individuals with control of the content of this program:

The faculty report the following relationships:

- Dimple R. Dhakal, PharmD
  - Declares no financial relationship(s) pertinent to this session
  - Declares off-label use of medications will not be discussed during this presentation

Course Director and Planning Committee Members declare no relevant financial relationship(s) pertinent to this session. Members include:

- Jennifer Elmer, DNP, APRN, CCNS
- Michael Huckabee, MPAS, PA-C, PhD
- Sarah Jane Kotval, BSW
- Wayne Nicholson, MD, PharmD, BCPS
- Garrett Schramm, PharmD, FCCP

For additional disclosure information regarding Mayo Clinic School of Continuous Professional Development accreditation review committee members visit [ce.mayo.edu](https://ce.mayo.edu), About Us, Disclosures - or -

<https://ce.mayo.edu/content/disclosures>

## System and Technical Requirements

For participants viewing the webcast, sessions are delivered via Mayo Clinic intranet web browser and Adobe® PDF. For participants viewing outside the Mayo Clinic firewall, a VPN connection is required for remote access. Recommended web browser includes Google Chrome. This session is planned and coordinated by **the Department of Pharmacy, Mayo Clinic.**