Nebraska Medicaid

DUR Matters

Newsletter of the Nebraska Drug Utilization Review (DUR) Program

Administered for the Department of Health and Human Services by the Nebraska Pharmacists Association

Volume 9, Issue 2 April 2014

Which of Your Patients is Likely to Overdose on Opioids?

Newspapers and professional journals have been flooded with articles highlighting the issues of substance abuse and overdose in the United States. We have all read about pill mills, doctor shopping and the epidemic of drug abuse. While Nebraska ranks lowest among the states for prescription drug overdose, each year the number increases. In 2008, the rate of death due to drug overdose was 5.5 per 100,000. That number increased to 6.7 per 100,000 in 2010.[1,2] Data from the Nebraska Regional Poison Center shows that the number of reported exposures to analgesics has increased from 3,156 in 2010 to 4,141 in 2012.[3]These statistics parallel the increase in prescribing of opioid pain relievers across the Unites States with a fourfold increase in sales from 1999 to 2010.[1]

While the above statistics do not distinguish the use of opiates for terminal cancer or end of life, the focus of this newsletter is on the use of opioids in the treatment of chronic, non-cancer pain.

Factors that Increase Risks of Death Due to Overdose in Patients with Chronic, Non-Cancer Pain

Certain opioids are associated with a higher risk of death from overdose. Methadone tops the list of drugs with the highest risk, followed by oxymorphone and fentanyl.[4] Approximately 33% of deaths due to opioid overdose involved no other medications.[5]

Specific drugs, when added to opioids, also increased the risk of overdose death. Approximately 50% of all deaths in the United States due to opioid overdose involved another drug and 16% involved drugs that were not specified. Benzodiazepines, in combination with opioids, were involved in 17% of the overdose deaths. Cocaine or heroin, in combination with opioids, was involved in 15% of deaths, and benzodiazepines with cocaine or heroin were involved in 3% of deaths.[5]

The opioid dose is a risk factor. In the CONSORT study, patients who received more than 100 mg per day morphine equivalent dose (MED) of opioids were nine times more likely to experience an overdose (fatal and non-fatal). In this study, it was observed that the patients who received the highest doses were most often male, smokers, had a history of treatment for depression or had a history of substance abuse. More total overdoses occurred, however, in patients taking lower doses, because the total number of patients taking lower doses was higher.[6] While higher doses are considered a risk factor, even patients taking lower doses are at risk for overdose. The information in Table 1 can be used to calculate the MED for the listed opioids. A patient's total daily dose of each opioid taken per day is multiplied by the factor listed and added together to calculate the approximate MED.

Drug Name	Factor to Calculate MED
Codeine	0.1499
Dihydrocodeine	0.1499
Fentanyl Patch	6.02
Fentora	0.07
Hydrocodone	1
Hydromorphone	4
Levorphanol	7.5
Meperidine	0.1
Methadone	7.6923
Oral fentanyl (except Fentora)	0.06
Oxycodone	1.4925
Oxymorphone	3.03
Tapentadol	0.2

Patients were at an increased risk of overdose if they had recently received a sedative-hypnotic medication. In comparison to the patients not taking a sedative-hypnotic in the study, patients taking a sedative-hypnotic were 30 times more likely to experience an opioid overdose. The risk did not increase with the frequency of receiving sedative-hypnotics.[6]

Strategies to Monitor Patients

Patients who must be treated long-term with opioids should be supervised closely and be instructed in the appropriate use of opioids.[6] Prescribers should ask patients about their use of alcohol and other drugs. When possible, patients with a history of mental health issues or substance abuse should be referred to a specialist. Successful pain management will address treatment of any existing mental health issues.[7]

Prescribers should consider "pain contracts" or opioid treatment agreements. These agreements should address at a minimum: how often a patient can obtain refills, conditions of early replacements for lost prescriptions, storage safety, using one prescriber, the patient will not "share" medication, and monitoring of adherence through urine screens. Patients need to be educated that the agreement is intended to protect them from adverse events and to foster a relationship of collaboration with the prescriber.[7]

In Washington, the Agency Medical Directors' Group partnered with prescribers to establish dosing guidelines for the use of opioids. These guidelines include specific recommendations for initiation, transition, and maintenance of opioids in patients with chronic non-cancer pain. Specifically, a MED threshold of 120 mg per day was recommended. The guidelines recommend that a patient receiving more than 120 mg MED should be referred to a pain specialist for treatment.[8] Workers' compensation data was evaluated after the implementation of the guidelines and modest decreases were observed in the volume of Schedule II and III prescriptions and deaths due to prescription opioids.[9]

References

1. CDC MMWR Vital Signs: Overdoses of Prescription Opioid Pain Relievers --- United States, 1999--2008 November 4, 2011 / 60(43);1487-1492

2. Centers for Disease Control and Prevention. Prevention Status Reports 2013: Prescription Drug Overdose— Nebraska. Atlanta, GA: US Department of Health and Human Services; 2014.

3. (NRPC) http://www.nebraskapoison.com/annualReports.aspx

4. Gwira Baumblatt J, Wiedeman C, Dunn J, Schaffner W, Paulozzi L, Jones T. High-Risk Use by Patients Prescribed Opioids for Pain and Its Role in Overdose Deaths. *JAMA Intern Med*. 2014 Mar 3. doi: 10.1001/jamainternmed.2013.12711. [Epub ahead of print]

5. Warner M, Hui Chen L, Makuc D. Increase in Fatal Poisonings Involving Opioid Analgesics in the United States, 1999-2006. NCHS Data Brief. No. 22. September 2009.

6. Dunn K, Saunders K, Rutter C, et al. Opioid Prescriptions for Chronic Pain and Overdose. *Ann Intern Med*. 2010 Jan 19;152(2):85-92.

7. McLellan AT, Turner B. Prescription opioids, overdose deaths, and physician responsibility. *JAMA*.2008;300 (22):2672-2673.

8. Agency of Medical Directors Group. Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. (2010 Update)

9. Dept of Labor & Industries. Interim Evaluation of the Washington State Interagency Guideline on Opioid Dosing for Chronic Non-Cancer Pain. (08/31/2009)

CONTACT INFORMATION

DUR Director
Marcia Mueting, PharmD, RP
6221 S 58th Street, Suite A
Lincoln, Nebraska 68516
Phone (402) 420-1500
Email dur@npharm.org

Nebraska Medicaid
Department of Health & Human Services
PO Box 95026
Lincoln, Nebraska 68509-5026
Phone (402) 471-9029
Email dhhs.MedicaidPharmacyunit@nebraska.gov