Disparities Found in Opioid-Prescribing Patterns in African Americans with Cancer

BY HEATHER LINDSEY

Compared with their Caucasian counterparts, African Americans with cancer and chronic renal disease are more likely to receive morphine rather than oxycodone, a prescribing pattern that leads to increased analgesic-related adverse events, according to a study now ahead of print in the Journal of Clinical Oncology (doi: 10.1200/JCO.2013.54.7992).

While everyone in the study received opioids, the types of medications used appeared to be inappropriate along racial lines despite the clinical risk associated with kidney disease, said the lead author, Salimah H. Meghani, PhD, MBE, RN, FAAN, Associate Professor in the Department of Biobehavioral Health Sciences & the New Courtland Center for Transitions & Health at the University of Pennsylvania School of Nursing.

Overall, African Americans, who often have predisposing risk factors for chronic kidney disease, were 71 percent less likely to receive oxycodone than white patients, independent of insurance coverage.

A number of biases, mostly unconscious, may be playing a role in prescribing patterns, she noted in an interview. “Providers aren’t intentionally trying to treat their patients differently. The social stereotypes we learn outside of the clinical setting seep inside clinical practice, and you discover this problem when you look at data retrospectively, but aren’t aware of it as it’s happening.”

Overall, African American patients were less likely to receive oxycodone than Caucasians were, with 53 percent and 82 percent being prescribed the drug, respectively. African Americans were more likely to be prescribed morphine than whites were, with 47 percent and 18 percent receiving prescriptions, respectively.

In cancer patients with chronic renal disease, 24.2 percent of African Americans received oxycodone compared with 75.8 percent of whites. In these same groups, morphine use was 58.8 percent and 41.2 percent, respectively.

African Americans were more likely to be from a lower income bracket and less likely to have private health insurance. They were also more likely to report worse pain scores and adverse effects from pain medications than whites.

Overall, patients with chronic kidney disease who were taking morphine had an increased severity of analgesic adverse effects than those taking oxycodone.

Asked for his opinion, Keith M. Swetz, MD, MA, a consultant in the Division of General Internal Medicine, Section of Palliative Medicine and a researcher in the Biomedical Ethics Program at the Mayo Clinic, said that while the study had several limitations, “work like this should certainly give us all pause when thinking about subconscious and conscious assumptions that we make in the clinic.”

Study Details

Meghani and her colleagues conducted a retrospective analysis of a three-month observational study of 182 cancer patients—73 of whom were African American and 109 who were Caucasian, all of whom were experiencing pain being treated with either morphine or oxycodone. Patients were recruited from two outpatient medical oncology clinics at the University of Pennsylvania Health System.

Overall, African American patients were more likely to be prescribed morphine than oxycodone. Patients were more likely to be from a lower income bracket and less likely to have private health insurance.

While race remained a significant predictor of the type of opioid prescribed, further analysis indicated that race was a strong predictor of adverse effect severity in patients with chronic kidney disease, with the type of pain medication selected partly mediating this relationship.

Possible Assumptions Being Made By Physicians

Decisions about prescribing oxycodone may be driven by a provider concern for misuse of the medication, Meghani

continued on page 32
at some neighborhood pharmacies, which might also influence prescribing decisions, Anderson said. In contrast, morphine may be readily available.

Another factor influencing prescribing could be that oncologists may not always be aware of impaired renal function in some patients or that morphine contains metabolites that stay in the body longer and result in adverse effects, she continued. Provider education may help oncologists become more aware of which opioids are better for patients with impaired kidney function or other chronic diseases.

Lack of education about certain opioid-related risks may potentially play a role in prescription disparities, Meghani said. However, it is unlikely that knowledge gaps may play out differently for racial subgroups.

Also commenting, R. Sean Morrison, MD, Professor of Geriatrics and Palliative Medicine at the Ichan School of Medicine at Mount Sinai Health System in New York, said that although there is a theoretical reason to believe that morphine metabolites may lead to an increase in side effects in people with renal disease, there are no clinical trials to support this assumption.

### Study Limitations

Regarding possible limitations to the study, Swetz noted that while the authors note that unconscious and subconscious racial stereotyping and bias about diversion and abuse can have an impact on decisions in the clinic, this observation is based on the practice patterns at this one specific center, rather than across multiple institutions. Still, he said, despite this limitation, the study’s results are a valuable tool for quality improvement at the University of Pennsylvania clinics studied.

Additionally, Morrison said, whereas the difference in side-effect prevalence is concerning, the lack of data regarding actual medication dosages makes this finding difficult to interpret. African Americans reported higher pain levels, and the increase in side effects in this group may well have been related to higher doses of opioids to treat higher pain levels rather than a difference in the analgesic agent.

Another concern, Swetz said, is that the modeling analysis looked at the effect of race on the type of opioid prescribed, as well as the effect of private insurance. Evaluating socioeconomic status by income instead of insurance might have attenuated the disparity.

This is particularly true because of the timing of the study, he noted: Extended-release (ER) oxycodone was not available until mid-2013 in its generic form, “and even then, cost was an issue as battles ensued about the abuse-deterrent form of the drug being available.”

Consequently, the researchers, who did not stratify their analysis by immediate vs. extended release, compared generic ER morphine to brand-only ER oxycodone. While this probably did not change the findings in this particular clinical setting, practice has changed significantly with the introduction of acceptable and affordable forms of generic ER oxycodone, Swetz explained.

Before generic ER oxycodone was available, practitioners would often opt for ER morphine because it was less expensive, he continued. Once ER oxycodone became generic, there was initially a push against it from the marketers of oxycodone because it wasn’t tamper resistant. Generic transdermal fentanyl was also available at the time of the study and has potentially less associated risk of adverse events in patients with kidney disease, and may have less potential diversion or abuse than oxycodone. Notably, an analysis of long-acting opioids should include the fentanyl patch, which was available as a generic, and is often the preferred agent for people with kidney disease.

Overall, Swetz said, a multicenter study of the use of various pain medications in different populations may be likely to find less disparity.

### Addressing Disparities

Morrison said that despite the limitations, the study reinforces the idea that disparities in pain treatment continue to exist—“Efforts need to be focused on better understanding the reasons for these disparities and addressing them.”

Many prior studies have documented differences across pain management settings and types of pain, Meghani noted, citing her own meta-analysis published in Pain Medicine in 2012 (13:150-174). Knowing that these disparities are a real phenomenon occurring in clinical practice is the first step to avoiding unequal treatment, she said.

Providers who prescribe morphine in patients with kidney disease because they are concerned about diversion or misuse should question whether they are making the best clinical decision due to the risks of the drug in this setting. Swetz said, “We see patients from all backgrounds with severe pain symptoms. Some have a history of abuse or diversion, regardless of race. We need to ask ourselves whether we’re making the best clinical decision that we can make for the patient who is in right in front of us.”