

# UROLOGY

UPMC DEPARTMENT OF UROLOGY



## Opioids Research:

### New Findings and Contributing Factors to the Epidemic

**Benjamin J. Davies, MD**, is an associate professor of urology, chief of the Department of Urology at UPMC Shadyside, and program director of the Urologic Oncology Fellowship. Dr. Davies also is responsible for starting the MRI Fusion Biopsy program in the Department of Urology at UPMC in July 2015.

A graduate of Mount Sinai Medical School in New York City, Dr. Davies completed surgical and urologic residencies at the University of Pittsburgh School of Medicine followed by fellowship training in urologic oncology at the University of California, San Francisco.

Dr. Davies' clinical specialties include urologic oncology, robotic prostatectomy and cystectomy, neobladder reconstruction, kidney and bladder cancer, and testicular cancer. His research portfolio is active and broad, and has dealt with prostate cancer outcomes and genomics basic science research, among other subjects.

Several recently published studies Dr. Davies and colleagues from the Department of Urology have completed bring to light new findings on the role of surgeons in the currently raging opioid epidemic in the United States, and more broadly how excess opioids entering the community are responsible for a significant proportion of the devastating effects of the crises accumulating daily across the country.

### Opioids, the Opioid Epidemic, and the Role of the Surgeon

Published in June in the *British Journal of Urology*, Dr. Davies' review paper, "The United States Opioid Epidemic: A Review of the Surgeon's Contribution to It and Health Policy Initiatives"<sup>1</sup> looks at the role of health care policies and health care providers, and specifically surgeons, with respect to the overprescribing of opioid pain medications.

There is no doubt at this point that prescription opioid abuse is rampant across the country, with some areas bearing relatively more of the brunt of the epidemic than others. The cause of the crisis is multifactorial. Pharmaceutical manufacturers, health care providers, and patients themselves all account for the problem to various degrees.



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— Benjamin J. Davies, MD

Illicit or street drugs notwithstanding, there's virtually only one path that opioid painkillers can take to get to the general population, and that is through a prescription from a health care provider.

"Overprescribing trends have been on the increase for nearly two decades, and that information is well-documented in the literature. We have conducted some preliminary research on aspects of prescribing trends after urologic surgery, and it is pretty clear from our pilot studies: there are too many pills in distribution," says Dr. Davies.

Surgeons, urologists, and many other providers are contributing factors to excess quantities of opioids reaching patients, but these providers also can be part of the solution to significantly reduce patient and community exposure to excess medications.

"In our review article, we highlight a telling piece of research from Shaw et al. That research points to the ability for patients to become chronic or persistent opioid users from merely a single day's use of opioids. This is a pretty stunning finding, and as we elaborate in the article, what this means for anyone on the prescribing side of the opioid equation is that addiction or chronic use can be the outcome from just one day's use. It is a gross understatement to say that we must be extremely judicious and evidence-based in our prescribing patterns if we are going to stem the tide of opioid addiction in this country," says Dr. Davies.

### What Can Be Done?

Dr. Davies and his collaborators highlight a number of areas in their review that can be valid targets of intervention to improve prescribing trends, educate patients and providers, and improve upon the surgical process and pain-management strategies to reduce the need for narcotic painkillers.

"Overprescribing of opioids is a long-term problem. We have had, in essence, a culture of overprescribing in this country driven by several factors. We have placed a great deal of emphasis on aggressive pain management, but we can do much better with improving our strategies in managing patient pain. More and stronger opioids are not the answer. Because providers must hand-deliver prescriptions for narcotics, this may lead to quantities being doled out in excess of what is really needed as a matter of convenience to both patient and doctor. However, an inconvenient

manner of prescription should not in any way dictate how much of a potentially dangerous and addictive substance is given to someone. This should be a commonsense approach industry and regulating bodies adopt as a means to improve prescribing methodologies and thereby right-size quantities delivered to patients," says Dr. Davies.

Other considerations such as the adoption of procedure-specific guidelines for pain management and opioid use are in order — strategies Dr. Davies and colleagues from the Department of Urology are actively engaged in developing and testing.

Dr. Davies concludes his review paper with the following warning to providers: "The crisis will not end with changing overprescribing by physicians. Addicts can source drugs with cheap imported fentanyl derivatives, a phenomenon



that has overwhelmed U.S. law enforcement and skyrocketed in popularity. Physicians can, however, stop needless overprescribing while

still treating postoperative pain appropriately. When that happens, at least one building block of this profound and intransigent crisis will be removed."

### Tracing Excessive Opioid Prescriptions: A Pilot Observational Study

Given the flood of opioids in the general population, overprescribing is likely a large cause of excessive medications in the hands of patients. To illustrate this point, Dr. Davies and colleagues conducted a pilot prospective observational study<sup>2</sup> of patients who underwent prostate and kidney surgical procedures between January and May 2017 at two hospitals.

These individuals were opioid naïve at the time of the study. Dr. Davies' investigation surveyed patients postoperatively to assess the quantity of 5 mg oxycodone-equivalents that were prescribed upon discharge, and they measured patient medication use and disposal trends. Prescriptions were verified through the electronic medical record and cross-referenced against the Pennsylvania Prescription Drug

Monitoring database. Patient use was determined via a phone survey in a self-reported manner.

"We saw a significant proportion of prescribed medications and an equally significant number of unused pills. Our study measured a total 4,065 prescribed pills with 2,622 remaining unused by the 155 patients in our study. A full 60 percent of the narcotics prescribed went unused, thereby remaining in the community. This is far too many unused opioids in the hands of patients where they can potentially do harm — directly or indirectly. Furthermore, in our study cohort, no patient was able to report receiving instructions or advice on how to properly dispose of any unused medications," says Dr. Davies.

As Dr. Davies' study points out, the analysis was a small cohort with limitations and other factors that may not make for generalizable results. However, the data is impactful and directional to support a larger study.

"I think at this point any dispute or opinion to the contrary that there are too many narcotics being prescribed, and that surgeons and providers of all disciplines bear some responsibility, would be disingenuous. Alternatives exist for pain control, and prescribing strategies to improve patterns of distribution and use are viable. For illustrative purposes, consider our program's changes with our robotic prostatectomy patients. We ceased using opioids for postoperative pain control months prior with no deleterious effects to patient pain scores and outcomes since. Change is needed in prescribing patterns. Urgently. We only need the will to do so," says Dr. Davies.

### References

1. Theisen K, Jacobs B, Macleod L, Davies BJ. The United States Opioid Epidemic: A Review of the Surgeon's Contribution to It and Health Policy Initiatives. *BJU Int*. 2018 Jun 13. Epub ahead of print.
2. Theisen K, Myrnga JM, Hale N, Cochran G, Sewall C, Macleod LC, Jacobs BL, Davies BJ. Excessive Opioid Prescribing After Major Urologic Procedures. *J Urology*. 2018 Aug 24. Epub ahead of print.

### Further Reading

- Lee AJ, Bandari J, Macleod LC, Davies BJ, Jacobs BL. Concentration of Opioid-Related Industry Payments in Opioid Crisis Areas. *J Gen Intern Med*. 2018 Nov 6. Doi: 10.1007/s11606-018-4700-7. Epub ahead of print.
- Theisen K, Davies BJ. The American Opioid Crisis: The Inexorable March to Death and Addiction. *Eur Urol*. 2018 Nov 12. Epub ahead of print.



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The Department of Urology at UPMC is at the forefront of providing clinical services, innovative treatment strategies, and fundamental research for diseases of the male and female urinary tract and the male reproductive organs.

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Through the Comprehensive Prostate and Urologic Cancer Center, we strive to provide state-of-the-art treatments and therapies for those with prostate and urologic cancers.

We are nationally renowned for our expertise in highly specialized technologies and minimally invasive surgical techniques, many of which have been developed or refined by UPMC surgeons.

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- Urologic Oncology — Fellowship Director: Benjamin J. Davies, MD
- Pediatric Oncology — Fellowship Director: Francis X. Schneck, MD

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