

United States For Non-Dependence: An Analysis of the Impact of Opioid Overprescribing in America

September 26, 2017



USND Report Background

This report is the culmination of research to identify and better understand the populations most at risk from exposure to prescription opioids as federal and state agencies increase their attention and resources to combatting the opioid crisis.

The research, conducted by QuintilesIMS Institute, is the most current analysis of national trends in opioid prescribing, as well as the use and impact of these drugs in treating postsurgical pain with the aim of identifying populations most at risk from opioid exposure.

QuintilesIMS Methodology

QuintilesIMS Institute conducted this retrospective analysis based on QuintilesIMS National Prescription Audit (NPA)[™], National Sales Perspective (NSP)[™], and QuintilesIMS Xponent[®] to assess prescriptions, sales, and drug quantities within therapeutic categories. Data was selected using a proprietary QuintilesIMS coding system, Uniform System Classification (USC), and the Anatomical Therapeutic Classification (ATC) codes. The analysis examined the number and type of prescriptions and quantity of pills prescribed in 2016 by patient age, gender, and geography, as well as prescriber specialty and drug costs.

QuintilesIMS Methodology

The project is based on QuintilesIMS Health services, including:

- **National Prescription Audit (NPA)™** is a suite of services that provides the industry standard source of national prescription activity for all products and markets.
- **National Sales Perspectives (NSP)™** measures spending within the US pharmaceutical market by pharmacies, clinics, hospitals, and other healthcare providers. NSP reports 100% coverage of the retail and non-retail channels for national pharmaceutical sales at actual transaction prices. The prices do not reflect off-invoice price concessions that reduce the net amount received by manufacturers.
- **QuintilesIMS Charge Data Master (CDM)** is a projected estimate of Hospital admissions from charges submitted by a statistically significant sample of nearly 10% of all acute care hospitals in the United States. Results are generally comparable to the National Hospital Discharge Survey 2009 from the Centers for Disease Control and Prevention (CDC). Admissions include inpatient and outpatient visits (hospital visits more or less than 24 hours respectively). Visits begin in the emergency room or elsewhere and include same-day surgeries, rehabilitation and reoccurring treatments such as chemotherapy. All payment types are included, such as Medicare, Medicaid, Commercial Third-Party, Cash, Tricare, Workman's Compensation and Charity.

Surgery-related overprescribing results in 3.3 billion unused pills available for misuse

3.3
BILLION
unused pills available
for misuse



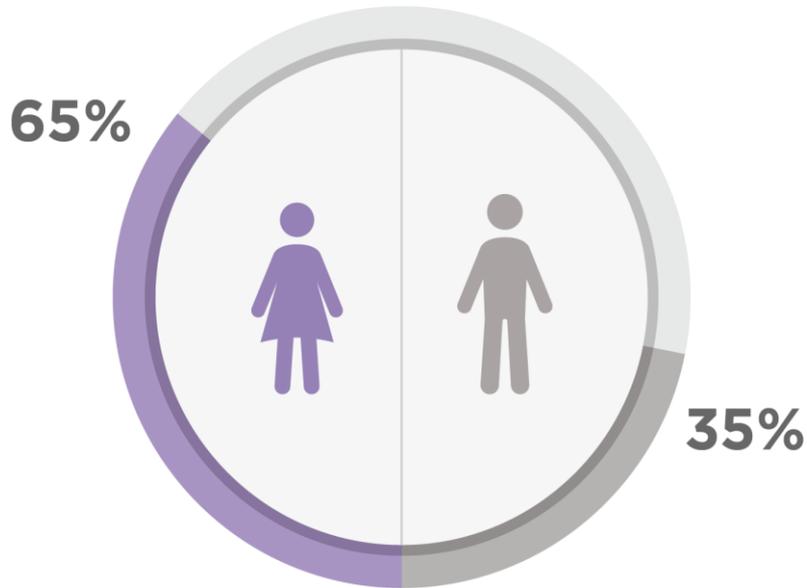
Notwithstanding increased efforts to reduce opioid use in the surgical setting, **nine in 10 patients receive opioids** to manage postsurgical pain.

Those given prescriptions for opioids were **prescribed an average of 85 pills**, which not only puts patients at risk, but also those around them.

In 2016, overprescribing of postsurgical opioids resulted in **3.3 billion unused pills** flooding into communities, making these drugs available for diversion and misuse.

Middle age women consume the most opioids

Share of Opioid Prescriptions by Gender



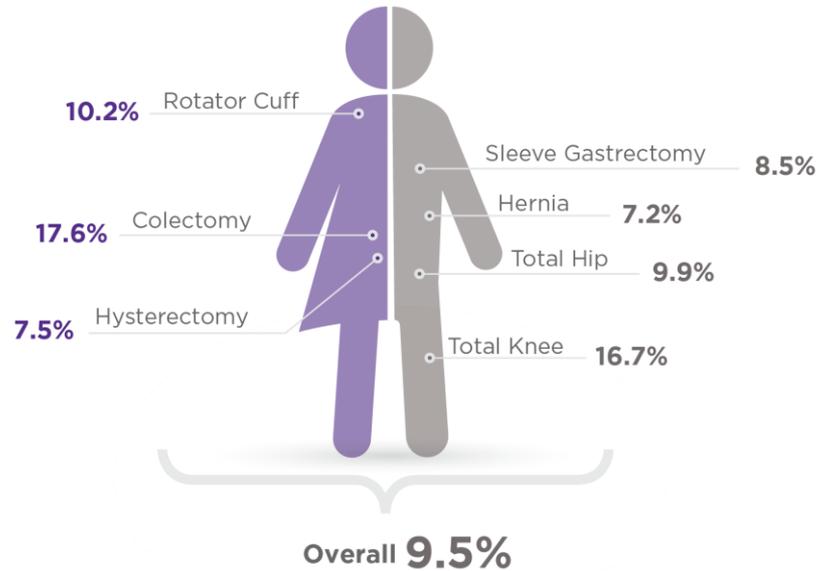
Women aged 40 to 59 years old are prescribed **more opioids** than any other age group and receive twice as many opioid prescriptions as their male counterparts.

About **13% of middle age women become newly persistent opioid users** who continue to use opioids three to six months after surgery, which puts them at high risk for dependence and addiction.

Among women, this age group has been shown to have **the highest death rates from opioids**.

Surgery is a gateway to opioid use and potential misuse

Percent of Newly Persistent Opioid Patients



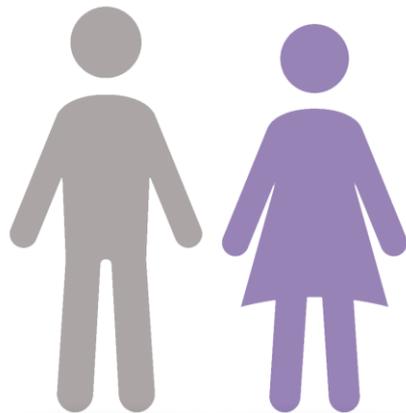
Newly persistent is defined as patients using an opioid far beyond (3-6 months) the postsurgical recovery period.

In 2016 alone, nearly **10% of patients** undergoing surgeries became newly persistent opioid users.

Of the seven surgeries studied in this analysis, **colectomy and knee replacement surgeries put patients most at risk**— leading to 17.6% and 16.7% of patients, respectively, becoming persistent opioid users.

Surgery is a gateway to opioid use and potential misuse

Persistent Opioid Use by Gender and Age



6.2%

Ages 18-34

7.3%

Ages 35-44

8.5%

Ages 45-54

9.9%

Ages 55-64

8.6%

Ages 18-34

9.8%

Ages 35-44

12.8%

Ages 45-54

13.3%

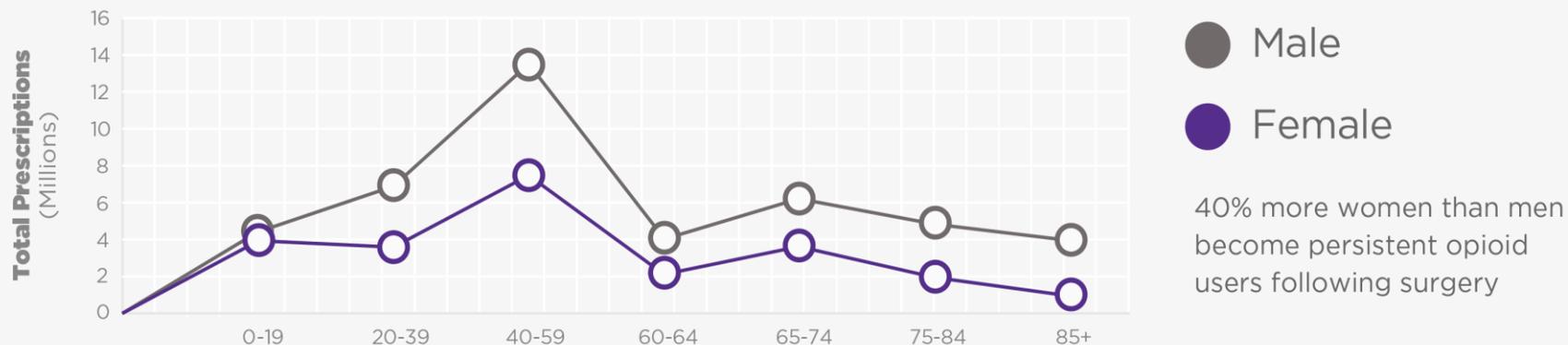
Ages 55-64

The differences in women and men are most pronounced among newly persistent opioid users ages 45 to 54 years old (12.8% vs 8.5%).

40% more women than men become persistent opioid users following surgery.

Age and gender trends reveal high rates of prescribing in particularly vulnerable populations

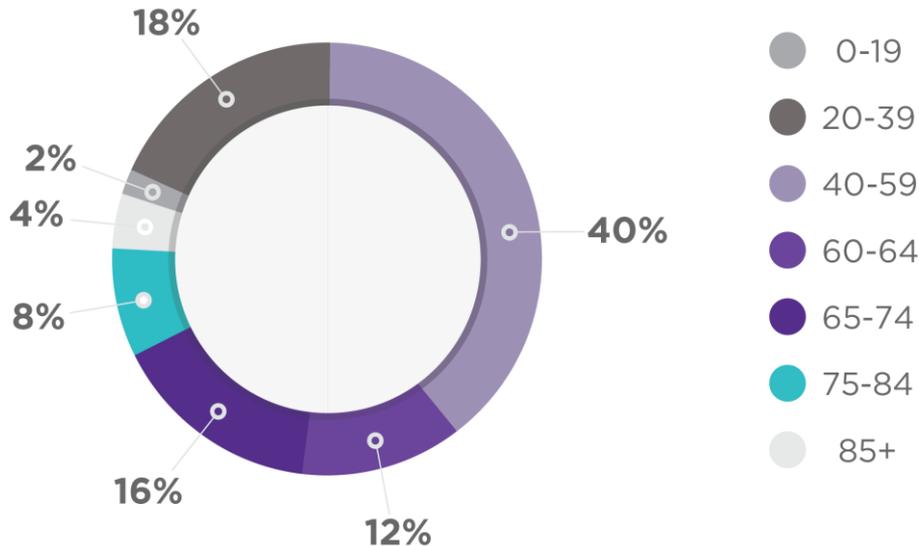
Number of Opioid Prescriptions by Age and Gender



Following surgery, patients receive an average of **85** opioid pills, whether they need them or not.

Age and gender trends reveal high rates of prescribing in particularly vulnerable populations

Share of Opioid Prescriptions
by Age, 2016



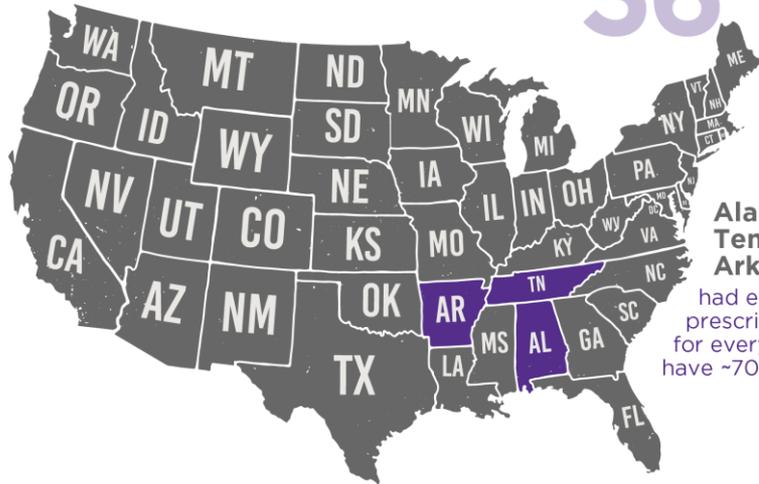
Nearly one in five opioid prescriptions went to **patients aged 20 to 39 years old**; the population most likely to misuse opioids and most likely to enter treatment for opioid addiction.

10- to 19-year-olds who are prescribed opioids receive, on average, a 60-day supply.

Enough opioids were prescribed in 2016 to provide every American with 36 pills apiece

Enough opioids were prescribed in 2016 to provide every American with 36 pills

36



The highest rate of opioid prescribing is **concentrated in more rural states**, primarily in the South.

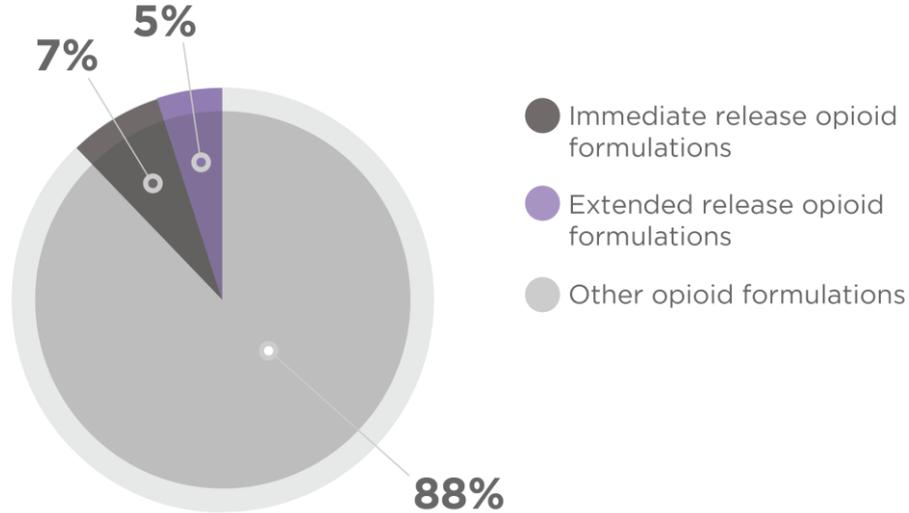
In Alabama, the state with the highest opioid prescribing rates, every resident could have **72 pills each**.

Opioid prescribing rates by state

State	Pills per capita	State	Pills per capita	State	Pills per capita
Alabama	72	Oregon	49	Alaska	37
Tennessee	70	Ohio	48	New Hampshire	37
Arkansas	68	Arizona	47	Texas	37
Oklahoma	65	Maine	46	Maryland	37
Kentucky	63	Georgia	46	Illinois	36
West Virginia	62	Montana	46	Vermont	36
Michigan	60	Pennsylvania	46	Colorado	36
Nevada	59	Utah	46	Rhode Island	33
Indiana	58	Wyoming	42	Connecticut	32
Missouri	57	Florida	42	North Dakota	31
Louisiana	57	Washington	42	New Jersey	30
South Carolina	56	New Mexico	41	California	30
Mississippi	55	Wisconsin	40	New York	30
Idaho	54	Iowa	40	Massachusetts	29
North Carolina	54	Nebraska	39	Minnesota	28
Kansas	54	South Dakota	39	Hawaii	26
Delaware	49	Virginia	37	District of Columbia	23

Immediate-release opioids are easiest to misuse

Share of Opioid Prescriptions
by Formulation, 2016



Immediate-release (IR) opioids now account for **88% of opioid prescriptions** and are the new initial source of opioid dependence and addiction.

Most IR opioids have no abuse-deterrent properties, making them potentially **dangerous and addictive**.

The estimated impact a 10% reduction in surgery-related opioid prescribing could have:



332 million fewer unused pills per year that are flowing into communities, substantially reducing the opportunities for prescription opioid diversion and misuse



300,000 fewer people each year becoming persistent opioid users following surgery, significantly reducing the number of patients at high risk of dependence or addiction



\$830 million saved annually in drug costs alone