Fatal Fentanyl: What You Need to Know About The Drug That Killed Prince

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TheBlaze
(http://www.theblaze.com/author/theblaze-staff/)

So far, 2016 has seen an alarming number of Fentanyl-related deaths (http://www.wsj.com/articles/hooked-one-familys-ordeal-with-fentanyl-1463158112), and late popular musician Prince was confirmed Thursday as another victim of this dangerous opioid. A report (http://abcnews.go.com/Entertainment/wireStory/latest-source-prince-autopsy-released-friday-39560876) from the Midwest Medical Examiner's Office identified Fentanyl overdose as the cause of his untimely death on April 21.

Though the details surrounding this event remain scarce — such as whether he was prescribed the drug or not — we already know a lot about this potent and fast-acting painkiller.


Death and Other Adverse Reactions by Fentanyl

Even when prescribed by a doctor, some people still experience serious adverse side effects from Fentanyl. The New York Times referred to it as heroin’s deadly cousin (http://www.nytimes.com/2016/03/26/us/heroin-fentanyl.html?_r=0), an apt description given recent trends.
Fentanyl is up to 50 times more potent than morphine (http://emedicine.medscape.com/article/2138678-overview) and dealers cut it into other drugs to sell to unsuspecting buyers. This cheap tactic gives a stronger high and keeps addicts coming back. U.S. law enforcement officials believe that much of the supply crosses the border from labs in Mexico or via mail-orders from factories in China.

In the case of prescribed usage, from Jan. 1, 2000 to Jan. 1, 2016, Fentanyl, under any and all of its brand name derivatives, has been included in 44,284 adverse reaction reports, of which 32,389 were reported as serious, according to OpenFDA (https://open.fda.gov/). Of those, Fentanyl was the primary suspect in 17,169 of the reports.

Fentanyl Adverse Event Breakdown

Breakdown of the outcomes of adverse events reported in association with Fentanyl, including both non-serious reports, serious reports, and reports where Fentanyl was listed solely as a concomitant/interacting drug (rather than the primary reaction suspect).

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Number of Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
<td>44,284</td>
</tr>
<tr>
<td>Number Serious</td>
<td>32,389</td>
</tr>
<tr>
<td>Number Serious &amp; Primary Suspect</td>
<td>17,169</td>
</tr>
<tr>
<td>Number Patient Deaths &amp; Primary Suspect</td>
<td>6,362</td>
</tr>
</tbody>
</table>

Source: Open FDA Adverse Events. Data from event reports between January, 2000 to January, 2016.
This doesn’t necessarily mean Fentanyl caused the serious adverse reactions, though. Patients who take it are usually already on other medications, thus increasing the risk of drug interactions. However, it is an important connection to note.

### Cost and Intended Purpose

Doctors prescribe Fentanyl under various brands, such as Subsys (https://drugs.healthgrove.com/l/739/Subsys), Actiq (https://drugs.healthgrove.com/l/736/Actiq), Fentora (https://drugs.healthgrove.com/l/737/Fentora), Abstral (https://drugs.healthgrove.com/l/735/Abstral) and Onsolis (https://drugs.healthgrove.com/l/738/Onsolis). These are some of the most expensive analgesics on the market. Though prescriptions can be for different amounts and delivery methods, such as the lozenge, patch or pills, the data visualized below is for the most commonly prescribed size and dosage of each medication.
Most Expensive Analgesic Medications

Most expensive drugs in this therapeutic class ranked by their expected price per prescription. The price per prescription is representative of the most commonly prescribed size and dosage of each medication.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Price Per Prescription</th>
</tr>
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<tbody>
<tr>
<td>Fentora</td>
<td>$0</td>
</tr>
<tr>
<td>Subsys</td>
<td>$5k</td>
</tr>
<tr>
<td>Abstral</td>
<td>$10k</td>
</tr>
<tr>
<td>Levorphanol</td>
<td>$15k</td>
</tr>
<tr>
<td>Lazanda</td>
<td>$20k</td>
</tr>
<tr>
<td>Sublimaze</td>
<td>$0</td>
</tr>
<tr>
<td>Duragesic</td>
<td>$5k</td>
</tr>
<tr>
<td>Actiq</td>
<td>$10k</td>
</tr>
<tr>
<td>Exalgo</td>
<td>$15k</td>
</tr>
<tr>
<td>Ponstel</td>
<td>$20k</td>
</tr>
</tbody>
</table>

Source: GoodRx Fair Price. Data updated May 07, 2017 5:41pm.
Fentanyl is meant to be used by cancer patients who are already on painkillers but experience “breakthrough” pain — pain that flares up even with the routine pain medication.

Though doctors are typically not advised to prescribe this drug for acute postoperative pain, some do. This can, and has, caused patient complications, including death.

**Prescription Rates**

Because many other analgesics carry fewer risks and successfully alleviate most pain, Fentanyl is used sparingly for those with particularly intense, chronic pain. However, it makes the top 10 most prescribed analgesic medications, according to Medicare Part D data.

Hydrocodone — which also goes by the brand name Vicodin — is still the number one prescribed drug on the list. Other drugs in this family, such as Oxycodone and Morphine, are also powerful opioids with a high potential for abuse.
Most Commonly Prescribed Analgesic Medications Through Medicare

Data represents national total claim counts through Medicare during 2013.

- Hydrocodone
- Tramadol
- Meloxicam
- Oxycodone
- Ibuprofen
- Morphine
- Morphine
- Naproxen
- CeleBREX
- Fentanyl
- OxyCONTIN

Total Claim Count
State-by-State Prescription Patterns

Prescription rates vary widely by state, though. According to 2012 data from CDC, healthcare providers in the highest-prescribing state wrote three times as many opioid painkiller prescriptions per patient compared to doctors in the lowest-prescribing state. CMS data from 2013 supports this trend: of beneficiaries who received a Fentanyl prescription, Hawaii patients had on average the lowest number of claims with 4.77 while South Dakota had 8.24, nearly double the rate in Hawaii.
Medicare Prescribing Rates for Fentanyl by State

Claims Per Beneficiary

<p>| |</p>
<table>
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<tbody>
<tr>
<td>4.42</td>
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<tr>
<td>8.24</td>
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</tbody>
</table>

Source: CMS
As of 2013; refreshed annually

Show details & Hide source details
Though some states may have larger senior populations, which could influence whether doctor prescription rates fall above or below the mean, the CDC notes that painful health conditions do not vary much from state to state. This means other factors play into the prescription rate discrepancies.

Potential factors include a lack of physician agreement on when to prescribe opioid pain medications, increased demand from patients who use opioids for non-medical purposes and the presence of pain clinics that prescribe large quantities to people who might not actually need them (often referred to as “pill mills”).

The Future of Fentanyl

Fentanyl has already taken lives across the United States [link](https://www.bostonglobe.com/metro/2016/05/16/cheap-plentiful-deadly-fentanyl/1cKq3EXscBWVtyL7hzmQDO/story.html) — from Maine to California, its effects reach far and wide. Recently, it has shown up cut into illicitly-obtained Norco [link](http://www.latimes.com/local/lanow/la-me-ln-norco-fentanyl-overdose-deaths-rise-to-14-problem-spreads-to-bay-area-20160426-story.html) in the Bay Area. Though drug enforcement authorities are starting to take note, Fentanyl has already taken hold of many illicit drug users and shows no sign of loosening its deadly grip.

*Note: This story was updated to reflect recent news developments.*

**Read More:** [The 50 Most Dangerous Drugs](https://drugs.healthgrove.com/stories/12356/most-dangerous-drugs)