OPIOID CONSUMPTION MAP
MORPHINE EQUIVALENTS, MG/CAPITA, 2010

http://ppsg-production.heroku.com/
ABUSE IS DIRECTLY RELATED TO DRUG PRODUCTION

Dasgupta, et al. Drug Alcohol Depend, 2005
WHAT IS THE PROBLEM?

United Kingdom Drug Related Deaths 2001 - 2011

*Note: heroin and morphine are reported as one category in the data from England, Wales and Scotland; since the focus of this analysis is on prescription opioids, that category was not included in this analysis.
DEAD FROM RX OPIOIDS

- Lenny Bruce – 1966 - comedian
- Leslie Carter – 2012 - singer
- Eric Douglas – 2004 - comedian
- J Drummond Webb – 2004 – heart surgeon
- Howie Epstein – 2003 – (Tom Petty and the Heartbreakers)
- Edward Fatu (aka Umaga) – 2009 – professional wrestler
- Danny Gans – 2009 – entertainer
- Greg Giraldo – 2010 – comedian
- DJ AM – 2009 – disc jockey
- Domino Harvey – 2005 – bounty hunter
- George Hickenlooper – 2010 – film maker
- Miss Elizabeth – 2003 – prof wrestling manager
- Steven Jensen – 2005 – (The Vandals)
- Chloe Jones – 2005 – pornography actress
- Heath Ledger – 2008 – actor
- Bruce Lee – 1973 – martial artist
- Gerald Levert – 2006 – singer
- Trinity Loren – 1998 – pornography actress
- Anna Nicole Smith – 2007 – “actress”
- Adrien Martin – 2010 – model
- Dest – 2009 – professional wrestler
- Stephen McKeag – 2000 – Ulster Defense Association Member
- Lani O’Grady – 2001 – actress
- Haley Paige – 2007 – pornography actress
- Wallace Reid, 1923 – actor – Rx morphine
- Sherri Russell – 2007 – professional wrestler
- Catya Sassoon – 2002 – model/actress
- The Rev – 2009 – (Avenged Sevenfold)
- Chase Tatum – 2008 – professional wrestler
- Amy Tryon – 2012 – equestrian
- Luna Vachon – 2010 – professional wrestler
IS THE INTERNET A MAJOR SOURCE OF PRESCRIPTION OPIOIDS?

“the Internet has become a pharmaceutical candy store stocked with addictive drugs, available at the click of a mouse to any kid with a credit card number”


“the Internet has become an open medicine cabinet, a help-yourself pill bazaar to make you feel good”

Drug Enforcement Administration (DEA) Kaufman, 2005
RX OPIOIDS ARE NOT OBTAINED FROM THE INTERNET BY ABUSERS

- Attempted to purchase
  - Oxycodone products (e.g. OxyContin®)
  - Hydrocodone/paracetamol (Vicodin)
  - Oxycodone/paracetamol (Percocet)
  - Tramadol (Ultram, not scheduled in US)

- Random sample of 10% (47) of 457 websites - 2006

- Credit card information, mailing address, completed online “medical exams,” and joined several required “clubs” for the privilege of ordering these drugs.

INTERNET PURCHASE OF OPIOID ANALGESICS

- Spent $2000: no schedule II or III drug received, including “European vikodin” (paracetamol and narcotic - not specified).
- Often had to join a club ($179-$499), but no drugs available after paying fee.
- “Bait and switch” tactics were frequent.
  - Many sites advertised names like OxyContin. Brand was “out of stock”, but they could provide tramadol (unscheduled).
- Successfully purchased 30 tabs (50 mg) of tramadol for $97.59.
  - Completed an online “medical examination”
  - The site physician writes a “prescription” and tramadol was delivered the next day by FedEx.

# Table 2  Summary of Internet order form

<table>
<thead>
<tr>
<th><strong>Personal Details:</strong></th>
<th><strong>Billing Address:</strong></th>
<th><strong>Shipping Address:</strong></th>
<th><strong>Extra Information:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td>Your Height</td>
<td>Your Weight</td>
<td>Your Sex</td>
</tr>
<tr>
<td>Is your Personal Healthcare Practitioner aware that you are requesting this medication?</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you been prescribed this medication before?</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you had a physical exam in the last 12 months?</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please state the medical condition requiring you to use this medication.</td>
<td>LOWER BACK PAIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you suffer from any seasonal allergies?</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List in detail any allergies you have to medicines.</td>
<td>NONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you currently under treatment for any health problems?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you suffering from high blood pressure?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you currently taking any prescription or non-prescription medicines?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List any significant family medical history.</td>
<td>NONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you currently pregnant or have you been nursing within the past 12 months?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will you be taking other medications while taking this medicine?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please let us know whether you are currently taking any opioid medications such as Tylenol #3, Percocet, Vicodin, OxyContin® or suffering from a seizure disorder or convulsions.</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you have a history of narcotic or opioid use, please indicate the last time you took a narcotic or opioid.</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Payment Information:**
Rx opioid drugs **are** available through the internet

Abusers do **not** get their drugs from the internet
RX OPIOIDS WERE AVAILABLE ON THE INTERNET

• Drug Enforcement Administration (DEA) restriction of product availability for online pharmacies
  • 2006 - Southwood Pharmaceuticals
    • 44 million hydrocodone doses, 80-90% of online pharmacies

• Online Consultation Services
  • Pay fee for “consult” with physician
  • Operations limited by DEA and FDA: a legitimate patient-doctor relationship cannot be established via internet correspondence

• US Bureau of Customs and Border Protection and FDA
  • Aggressive interdiction of medication entering the country from international online pharmacies
  • 2005 – 72,000 interdictions!

Boyer & Wines, 2008
INCREASED LAW ENFORCEMENT

Record-Breaking Internet Pharmacy Prosecution Nets Millions for Iowa Law Enforcement

* Reuters is not responsible for the content in this press release.

Wed Jun 10, 2009 3:56pm EDT

Record-Breaking Internet Pharmacy Prosecution Nets Millions for Iowa Law Enforcement

6-Year Federal Investigation Results in 26 Convictions, Forfeiture of Over $7 Million, and Sharing of Over $4 Million in Dubuque, Cedar Rapids, and Des Moines Areas

http://www.usdoj.gov/usao/ian
THEN WHO ARE THE USERS?

- NSDUH - 6.6% ages 12 and above reported misuse of prescription drugs during 2007. Nationally = 16 million persons
  - 0.5% (80,000 individuals) reported obtaining pain relievers via the Internet
  - 1.0% or 160,000 persons for tranquilizers
  - 4.1% or 656,000 persons for stimulants
  - 0.7% or 112,000 persons for sedatives
- There are significant numbers of people obtaining prescription drugs via the Internet, and that stimulants are the drugs most often purchased through this mechanism.
- But they are a small proportion of the total abusers

Schepis et al., 2008
Fig 4. Sources of prescription drugs in the past year among 12th graders, Monitoring the Future, 2007.
RADARS® SYSTEM
SOURCE OF ABUSED OPIOID, 2008

College Survey Methadone Program

- 0%
- 50%
- 100%
- 150%
- 200%
- 250%

Other
Internet
Theft
Purchased Illegally
Prescribed by Doctor
Friends & Relatives
OTHER STUDIES

• Only 11 of 100 (11%) drug-dependent patients in treatment endorsed use of the internet to obtain drugs. Only 6 reported had actually obtained drug from internet. Gordon et al. (2006)

• Only 1% of 515 prescription drug abusers recruited from the Miami club scene had ever utilized the Internet to purchase medications without a prescription (Inciardi et al., 2008).

• Why not?
  • “prescription drugs are cheaper on the street;”
  • “there are too many ‘rip offs”
  • “big brother is watching”
WHO ARE THE TYPICAL POPULATIONS OF “END USERS”? 

- Small numbers of each category
  - High school students
  - College students
  - Abusers in treatment programs
- Potential is high
- New developments
Underground Website Lets You Buy Any Drug Imaginable

BY ADRIAN CHEN, GAWKER  06.01.11 2:25 PM
Silk Road anonymous market

Shop by Category

- Drugs 5,511
  - Cannabis 1,166
  - Dissociatives 119
  - Ecstasy 463
  - Opioids 444
  - Other 206
  - Precursors 18
- Prescription 1,456
- Psychedelics 789
- Stimulants 598
- Apparel 166
- Art 8
- Books 889
- Collectibles 6
- Computer equipment 57
- Custom Orders 57
- Digital goods 372
- Drug paraphernalia 183
- Electronics 59
- Erotica 424
- Fireworks 15
- Food 6
- Forgeries 98
- Hardware 5
- Herbs & Supplements 16

News
- Closing the Armory
- A brand new look for Silk Road!
- The gift that keeps on giving
- Who’s your favorite?
- Acknowledging Heroes

Walmart
- Save money. Live better.

20mg Adderall IR
- Adderall - 20mg - Instant Release - 5 Pack ★
- $7.08

5 GaryGlitter MDMA Pill*UK Vendor Free UK Shipping
- $3.96

(1) Gram Dutch Crystal MDMA as PURE as it gets!
- $7.63

1 Gram Highest Quality Crystal Methamphetamine
- $13.86
<table>
<thead>
<tr>
<th>Title</th>
<th>Price</th>
<th>Seller</th>
<th>Ship To</th>
<th>Ship From</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x (Sample) Avatar Blotter 180ug</td>
<td>£2.32</td>
<td>bloomingcolor(100)</td>
<td>Worldwide</td>
<td>EU</td>
<td>add to cart</td>
</tr>
<tr>
<td>10x (Ten strips) Avatar Blotter 180ug</td>
<td>£16.72</td>
<td>bloomingcolor(100)</td>
<td>Worldwide</td>
<td>EU</td>
<td>add to cart</td>
</tr>
<tr>
<td>Hydrocodone (Norco) 10mg-325mg x 5</td>
<td>£4.51</td>
<td>time2deal(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>Robaxin (Methocarbamol) 500mg x 10</td>
<td>£4.00</td>
<td>time2deal(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>100 mg Psilocin (4-HO-DMT) Freebase</td>
<td>£5.94</td>
<td>swish(100)</td>
<td>Worldwide</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>1 Gram DMT - Offwhite color like white chocolate</td>
<td>£7.61</td>
<td>swish(100)</td>
<td>Worldwide</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>2c-B - 250 MG</td>
<td>£7.82</td>
<td>swish(100)</td>
<td>Worldwide</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>1 OZ Psilocybe Cubensis - Thai Pink Buffalo strain</td>
<td>£20.00</td>
<td>swish(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>500 mg 4-HO-DMT (Psilocin) Freebase</td>
<td>£24.78</td>
<td>swish(100)</td>
<td>Worldwide</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>1 gram (1000 MG) 2c-I</td>
<td>£7.41</td>
<td>swish(100)</td>
<td>Worldwide</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>LSD Blotter x 1</td>
<td>£3.04</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>2C-E 10 x 10mg Caps</td>
<td>£7.83</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>2C-B - 10mg x 10 Caps</td>
<td>£9.56</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>Magic Truffles 12.5grams Fresh</td>
<td>£3.48</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>1g Afghani Hash</td>
<td>£2.67</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>MDMA Tan 1g - REAGENT TESTED</td>
<td>£8.70</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>1/8th (3.5g) High Quality Cannabis</td>
<td>£5.10</td>
<td>Ivory(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>1oz (28g) of Ed Rosenthal</td>
<td>£41.38</td>
<td>GreenCo(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>Avatars (180-200ug)</td>
<td>£1.96</td>
<td>owsley(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>25C-NBOMe Blotters 3x350ug LAST FEW REMAINING</td>
<td>£3.88</td>
<td>NBOME(100)</td>
<td>World</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>DOC Blotter 1.5mg</td>
<td>£1.41</td>
<td>NBOME(100)</td>
<td>World</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>DOC Blotter 1.5mg x 3</td>
<td>£3.88</td>
<td>NBOME(100)</td>
<td>World</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>1/8oz (3.5g) of Super Bud</td>
<td>£6.45</td>
<td>GreenCo(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>4x Avatars (180-200ug)</td>
<td>£7.05</td>
<td>owsley(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
<tr>
<td>1/8oz (3.5g) of Ed Rosenthal</td>
<td>£6.47</td>
<td>GreenCo(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>1oz (28g) of Super Bud</td>
<td>£41.38</td>
<td>GreenCo(100)</td>
<td>US</td>
<td>US</td>
<td>add to cart</td>
</tr>
<tr>
<td>DOC UK Sample Offer 1.5mg Blotter</td>
<td>£0.96</td>
<td>NBOME(100)</td>
<td>UK</td>
<td>UK</td>
<td>add to cart</td>
</tr>
</tbody>
</table>
Facing Black Market, Pfizer Is Looking Online to Sell Viagra
Internet pharmacy was important for Rx opioids in early 2000s, but interdiction efforts reduced this source by mid-2000s

- Silk Road – internet will again become frequent?

Rise of pain clinics in US may have been fueled by the need for an in-person, domestic source of prescription opioids for abuse. These sources are under closer scrutiny now.

Most abusers continue to get their drugs from

- New initiates – friends and family, doctors
- Experienced abusers – dealers and doctors
- Small (but growing?) number from internet

Impact of legitimate sites like Viagra?
THANK YOU!