



# The Nonmedical Use of Prescription Drugs: Policy Direction Issues

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# BAYER PHARMACEUTICAL PRODUCTS.

## Send for samples and Literature to

**ASPIRIN**  
*The substitute for the salicylates*

**PROTARGOL**  
*The anti-gonorrhea*

**PIPERAZINE**  
*The anesthetic*

**EUROPHEN**  
*The salicylates modern substitute*

**ARISTOL**  
*The antiseptic and disinfectant*

**QUINALGEN**  
*The anti-malaria*

**GUAIACOL CARB**  
*The anti-tuberculous alternative*

**HEROIN-HYDROCHL**  
*The sedative for cough*

**HEROIN**  
*The sedative for coughs*

**LYCETOL**  
*The uric acid solvent*

**SOMATOSE**  
*The most assimilable sugar*

**PHENACETIN**  
*The safest hypnotic*

**FERRO-SOMATOSE**  
*The iron-ferrous nutrient*

**SULFONAL**  
*The reliable hypnotic*

**SYCOSE**  
*The sweetest for oral use*

**HEMICRANIN**  
*The specific for malaria*

**IODOTHYRINE**  
*The active principle of the thyroid*

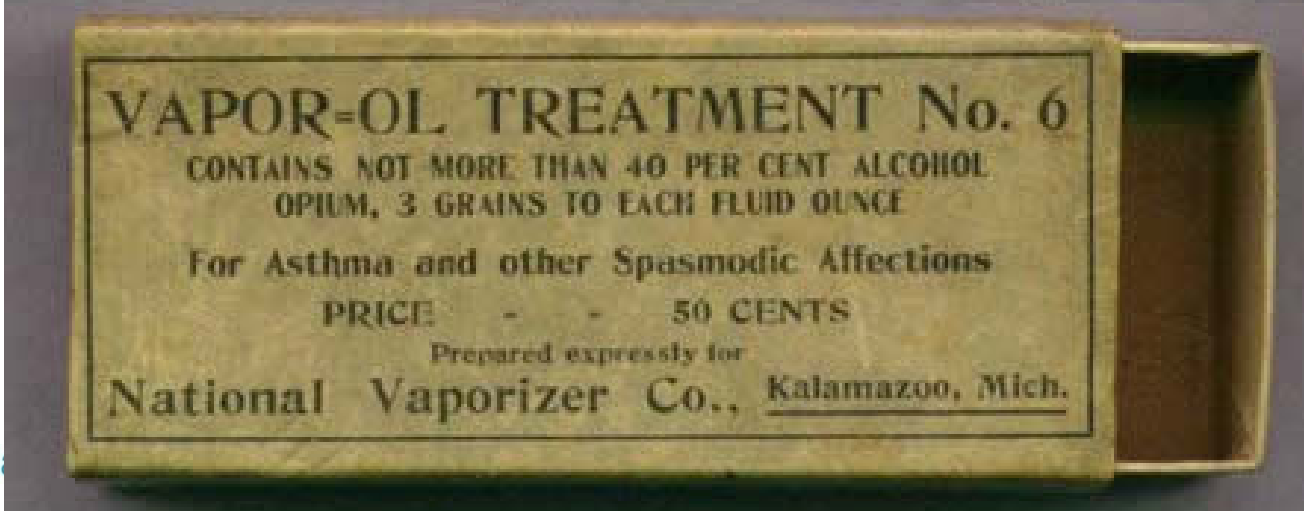
**TRIONAL**  
*The safest hypnotic*

**SALOPHEN**  
*The antirheumatic and antineuralgic*

FARBENFABRIKEN OF  
ELBERFELD CO.

40 STONE STREET,  
NEW YORK.





From fresh Coca Leaves and the  
Purest Wine.

Recommended for  
**NEURALGIA, SLEEPLESSNESS,  
DESPONDENCY, ETC.**



Dr. ARCHIBALD SUTHER—  
"Fremont's Review"—states that  
"Coca" increases energy,  
removes drowsiness, re-  
lives the spirits, and makes  
the consumer to bear cold,  
wet, great bodily exertion,  
and even want of food, to a  
surprising degree, with ease  
and impunity.

For Fatigue of mind or body.

# METCALF'S Coca Wine

A Pleasant Tonic and  
Invigorator.

Coca Leaves have been recommended  
by Ringer as valuable in **Febriile  
Disorders**, by restraining tissue met-  
amorphosis, and for the same reason in  
Pneumia.

With decided anodyne and anespa-  
smic qualities, they have been em-  
ployed in Typhus, Scurbutina, Gas-  
tralgia, Anemia, Enteralgia, and to  
assist digestion.

Wine of Coca is probably the most  
valuable Tonic in the Materia Medica.  
With stimulating and anodyne prop-  
erties combined, it acts without debilitat-  
ing.

As a "**Voice Tonic**," to Public  
Speakers and Singers it will be found

indispensable, being a "tissue" of the vocal chords, thereby greatly  
strengthening and increasing the volume of voice.

**Dose of Wine of Coca.**—One wineglassful three times daily,  
between meals.

Prescriptions' sample bottles by express, prepaid, upon receipt of **One  
Dollar.**

Theodore Metcalf. **ESTABLISHED 1837.** Frank A. Davidson,

**THEODORE METCALF & CO.,**

39 Tremont Street,

BOSTON, MASS.



**COCAINE**  
**TOOTHACHE DROPS**  
Instantaneous Cure!  
**PRICE 15 CENTS.**  
Prepared by the  
**LLOYD MANUFACTURING CO.**  
219 HUDSON AVE., ALBANY, N. Y.  
For sale by all Druggists.  
(Registered March 1885.) See other side.





PROPRIETARY ARTICLES


**BURNETT'S**  
STANDARD **PERFECTLY** PURE **FLAVORING**  
HIGHLY **EXTRACTS**  
CONCENTRATED

JOSEPH BURNETT & CO., BOSTON, MASS.

**THE**  
**BEST HAIR DRESSING**  
**COCOAINÉ**

It kills Dandruff, promotes the  
Growth of the Hair, cures Scald Head  
and all Irritation of the Scalp.

JOSEPH BURNETT & CO., BOSTON, MASS.

- 
- **“At the bottom of the noisome pit of charlantry crawl the drug-habit specialists. They are the scavengers delving amid the carrion of the fraudulent nostrum business for their profits. The human wrecks made by the opium- and cocaine-laden secret “patent medicines” come to them for cure and are wrung dry for the last drop of blood.”**

**Samuel Hopkins Adams (1905)**

# Beverages and Diversions

**ABOARD YOUR CLIPPER**



**PAN AMERICAN WORLD AIRWAYS**  
*The System of the Flying Clippers*

Backgammon

Checkers

Dice

Dominoes

## MISCELLANEOUS

Newspapers

Stationery

Magazines

Post Cards

## SERVICE ITEMS

Electric Razor

Medical Kit

Tooth Brushes

Ice Bag

Benzedrine Inhalers

Sewing Kit

Chewing Gum

Kleenex

## Divertissements

### JEUX

Trictrac

Échecs

Dés

Cartes de Jeu

Dés de Poker

Dominoes

### ARTICLES DIVERS

Journaux

Papier à écrire

Revues

Cartes Postales

### ARTICLES DE SERVICE

Rasoir Électrique

Boîte à pharmacie

Brosses à dents

Sac à glace

Tuyau

Boîte à coudre

Pastilles de Gamme

Papier Kleenex

## Beverages COCKTAILS

Manhattan

Martini ..

\$ .50

.50

### DRINKS

Rye .....

Scotch .....

Canadian Whiskey

Brandy .....

Bourbon .....

Rum .....

Sherry .....

.65

.65

.65

.65

.65

.65

.50

(No extra charge for Soda Water)

### CIGARETTES

Assorted Brands .....

(No gratuities accepted. Thank you.)

.20

## Assortiment de Boissons

### COCKTAILS

Manhattan

Martini ..

Manuale des  
États-Unis d'Amérique

\$ .50

.50

### BOISSONS

Rye .....

Scotch .....

Whiskey Canadien

Brandy .....

Bourbon .....

Rhum .....

Vin Xérés .....

.65

.65

.65

.65

.65

.65

.50

(L'eau Seltzer est Gratuit)

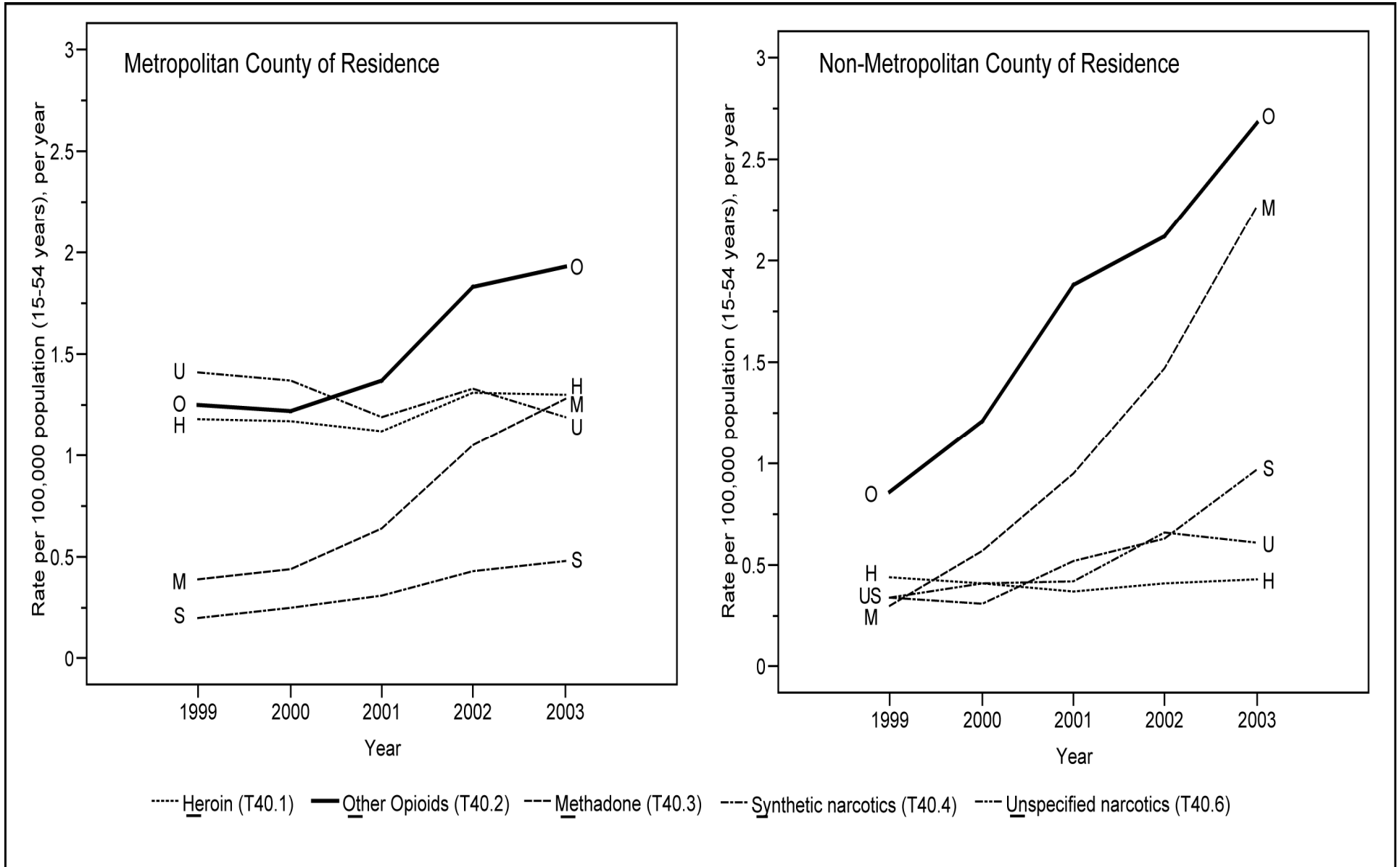
### CIGARETTES

Marques Assorties .....

(On n'accepte pas de pourboires. Merci bien.)

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# Opioid Deaths per 100,000 (15-54 years)

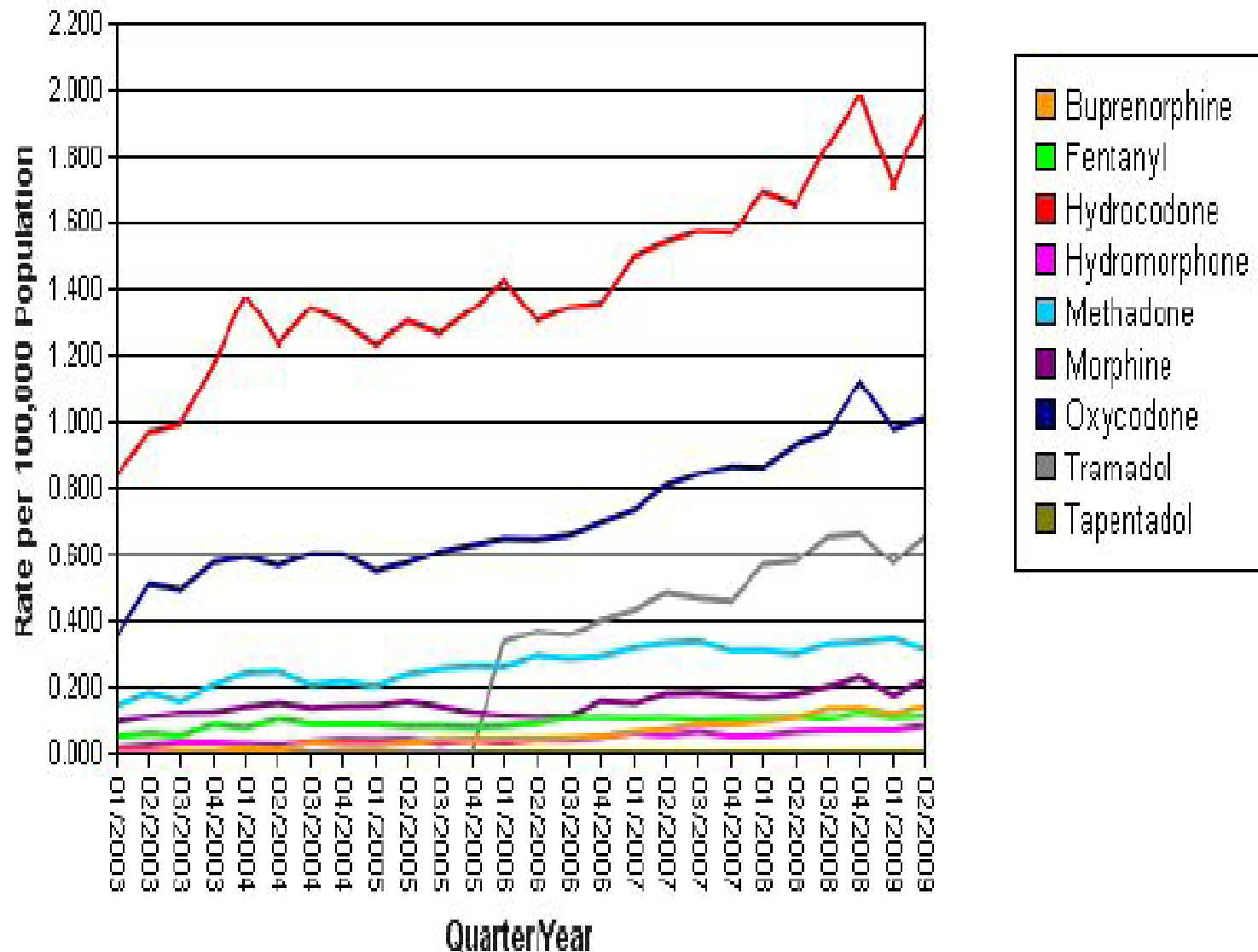


# RADARS System Components

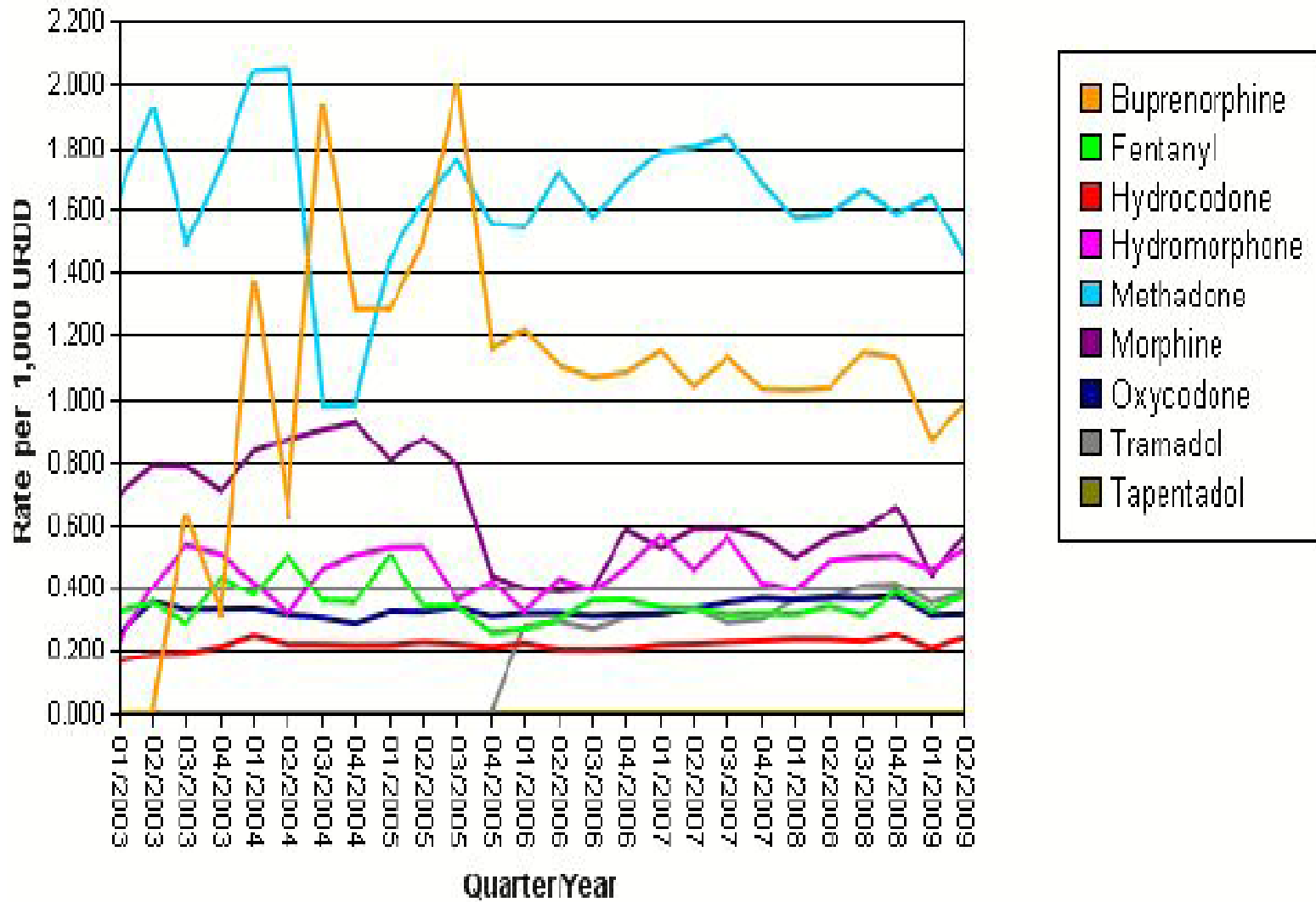
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- Opioid Treatment Programs
  - 75 nationally distributed methadone programs
- Drug Diversion
  - Over 300 law enforcement agencies
- Survey of Key Informant Patients
  - Patients entering treatment program
- Poison Control Centers
  - 48 poison control centers
- College Survey
  - Twice a year internet survey of college students
- Healthcare Professionals

### 5.3.2.1 Poison Center Intentional Exposure Rates (per 100,000 Population) Over Time – All RADARS System Opioids



### 5.3.2.2 Poison Center Intentional Exposure Rates (per 1,000 URDD) Over Time – All RADARS System Opioids



J Pain Symptom Manage. 2006 May;31(5):465-76.

**A comparison of the abuse liability of tramadol, NSAIDs, and hydrocodone in patients with chronic pain.**

[Adams EH](#), [Breiner S](#), [Cicero TJ](#), [Geller A](#), [Inciardi JA](#), [Schnoll SH](#), [Senay EC](#), [Woody GE](#).

**Abstract**

Concern about abuse/dependence in chronic pain patients taking opioid analgesics may lead to undertreatment of pain, yet little is known about the prevalence of abuse/dependence in these patients and how it differs among analgesic agents. The objective of this study was to assess the prevalence of tramadol abuse compared to nonsteroidal anti-inflammatory drugs (NSAIDs) and hydrocodone-containing analgesics in patients with chronic noncancer pain (CNP). The study had three arms. The first arm consisted of subjects prescribed tramadol alone; the second of subjects randomized to either NSAIDs or tramadol; and the third of subjects randomized to hydrocodone or tramadol. Each investigator received two boxes of prescriptions randomized so that one in every four prescriptions was for tramadol. Upon deciding on the therapeutically appropriate arm, the physician selected the appropriate box, opened the next envelope and completed the enclosed prescription. After the initial randomization, physicians could prescribe whatever medication was therapeutically appropriate. A total of 11,352 subjects were enrolled. Up to nine interviews using a structured questionnaire were conducted over a 12-month period. An algorithm called the "Abuse Index" was developed to identify subjects who were abusing the drug. The primary components of the index were increasing dose without physician approval, use for purposes other than intended, inability to stop its use, and withdrawal. The percent of subjects who scored positive for abuse at least once during the 12-month follow-up were 2.5% for NSAIDs, 2.7% for tramadol, and 4.9% for hydrocodone. When more than one hit on the algorithm was used as a measure of persistence, abuse rates were 0.5% for NSAIDs, 0.7% for tramadol, and 1.2% for hydrocodone. Thus, the results of this study suggest that the prevalence of abuse/dependence over a 12-month period in a CNP population that was primarily female was equivalent for tramadol and NSAIDs, with both significantly less than the rate for hydrocodone



# Supply-Side Approaches to Prescription Drug Abuse

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- What are the possible sources of the drugs?
  - Pharmaceutical companies
  - Prescribers and dispensers
  - Counterfeiters
  - Internet
  - Reverse distributors (destruction facilities)
  - The medicine cabinet
  - Friends and family

# Pharmaceutical Companies to Retail Sales and Beyond

- Regulations control the supplies
  - Delivery of raw product to manufacturing plant
  - Security of manufacturing facility
  - Delivery of product to wholesaler or retailer
  - Abuse deterrent formulations
- Wholesaler
  - Security of facility
  - Exceptional order algorithms
  - Delivery of product to retailer

# Pharmaceutical Companies to Retail Sales and Beyond

- Retail pharmacy
  - Security of facility
  - Regulations in filling prescriptions
- Sales force/pharmaceutical detailing
  - May result in increased prescribing
  - Inform prescribers about appropriate use
    - methadone
- Reverse Distributers/Destruction Facilities
  - Security of facility
  - Regulations regarding destruction

# Prescribers and Dispensers

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- Regulation regarding who can prescribe or dispense
- Education of prescribers and dispensers
  - Universities
  - Pharma companies (competing interests)
  - Accredited and non-accredited CME programs
    - Knowing the drugs
    - Appropriate patient assessment and selection
    - Appropriate patient monitoring
    - Alternative treatments
    - Appropriate withdrawal
    - Treatment options for abuse and addiction

# Recognizing the Drug Abuser

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## *Most Predictive Behaviors*

- Selling prescription drugs
- Prescription forgery
- Stealing or borrowing drugs from another patient
- Injecting oral formulations
- Obtaining prescription drugs from nonmedical sources
- Concurrent abuse of related illicit drugs
- Multiple unsanctioned dose escalations
- Repeated episodes of lost and/or stolen prescriptions

# Recognizing the Drug Abuser

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## *Less Predictive Behaviors*

- Aggressive complaining about the need for higher doses
- Hoarding drug during periods of reduced symptoms
- Requesting specific drugs
- Obtaining prescriptions from multiple physicians
- Unsanctioned dose escalation
- Unapproved use of the drug
- Reported psychic effects not intended by the physician
- Use of multiple pharmacies

# Guidelines to Prescribe Drugs with Abuse Liability

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- Set clear rules and expectations for prescriber and patient
  - Have signed agreement if possible
- Set the dose of medication at the appropriate level and titrate as necessary

# Guidelines to Prescribe Drugs with Abuse Liability

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- Provide a sufficient quantity of medication with additional “rescue doses”
- Ask patient to bring in all original medication bottles with or without medication
  - Date filled
  - Pharmacy
  - Prescribing physician
  - Number of pills dispensed
  - Number of remaining pills



# Guidelines to Prescribe Drugs with Abuse Liability

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- Monitor for lost or stolen prescriptions
- Obtain random urine screens.
  - Know the drugs for which the laboratory screens
- Use adjunctive medications as necessary
- Document, document, document

# Guidelines to Prescribe Drugs with Abuse Liability

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- See the patient as frequently as needed
- Work with significant others or caregivers
- Know how to withdraw the patient from the medication
- Know the pharmacology of the drugs being prescribed
  - Duration of action
  - Parenteral to oral conversion

# Guidelines to Prescribe Drugs with Abuse Liability

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- Bring patient in for unscheduled visits
- Obtain release to contact other health care providers
- Limit prescribing medications prn since this promotes drug seeking behavior
- Adequately treat the condition to avoid problems of pseudoaddiction

# Treatment Options

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- Opioids
  - Agonist therapies
    - Methadone
    - Buprenorphine
  - Antagonist therapies
    - Naltrexone
  - Behavioral therapies
- Sedatives/tranquilizers
  - Behavioral therapies
- Stimulants
  - Behavioral therapies