



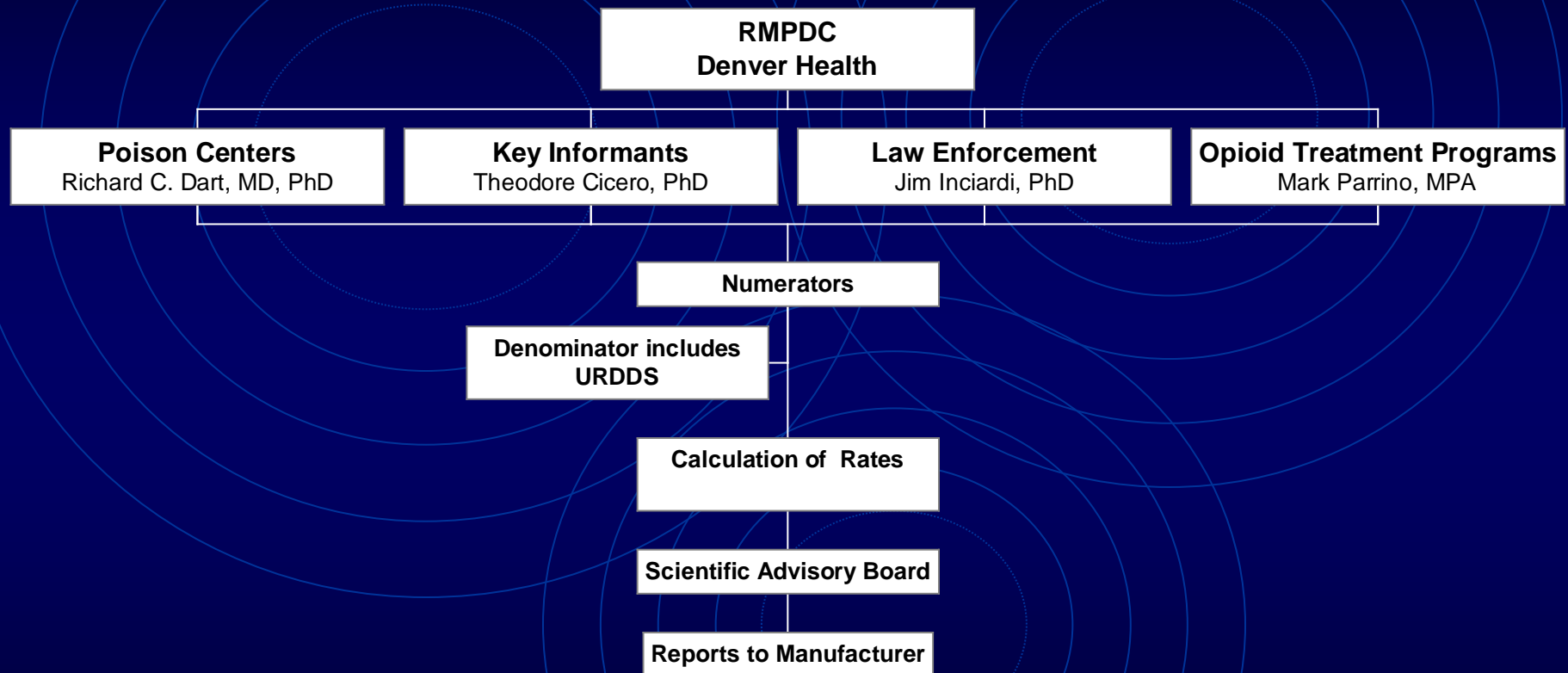
RADARS[®] System “Fentanyl Study”

Richard C. Dart, MD, PhD

Director, RADARS[®] System, Denver Health

Professor, University of Colorado School of
Medicine

Organization of RADARS[®] System



- The RADARS System has at least one system active in 854 of the 930 3 digit zip codes in the United States.
- 792 of 854 (93%) had evidence of drug abuse activity.

Four Views on Prescription Drug Abuse

Poison Centers

- Acute incident - calling for care advice
- All ages and geographic regions

Key Informants

- Dependent or addicted patients
- Health care provider perspective

Law Enforcement

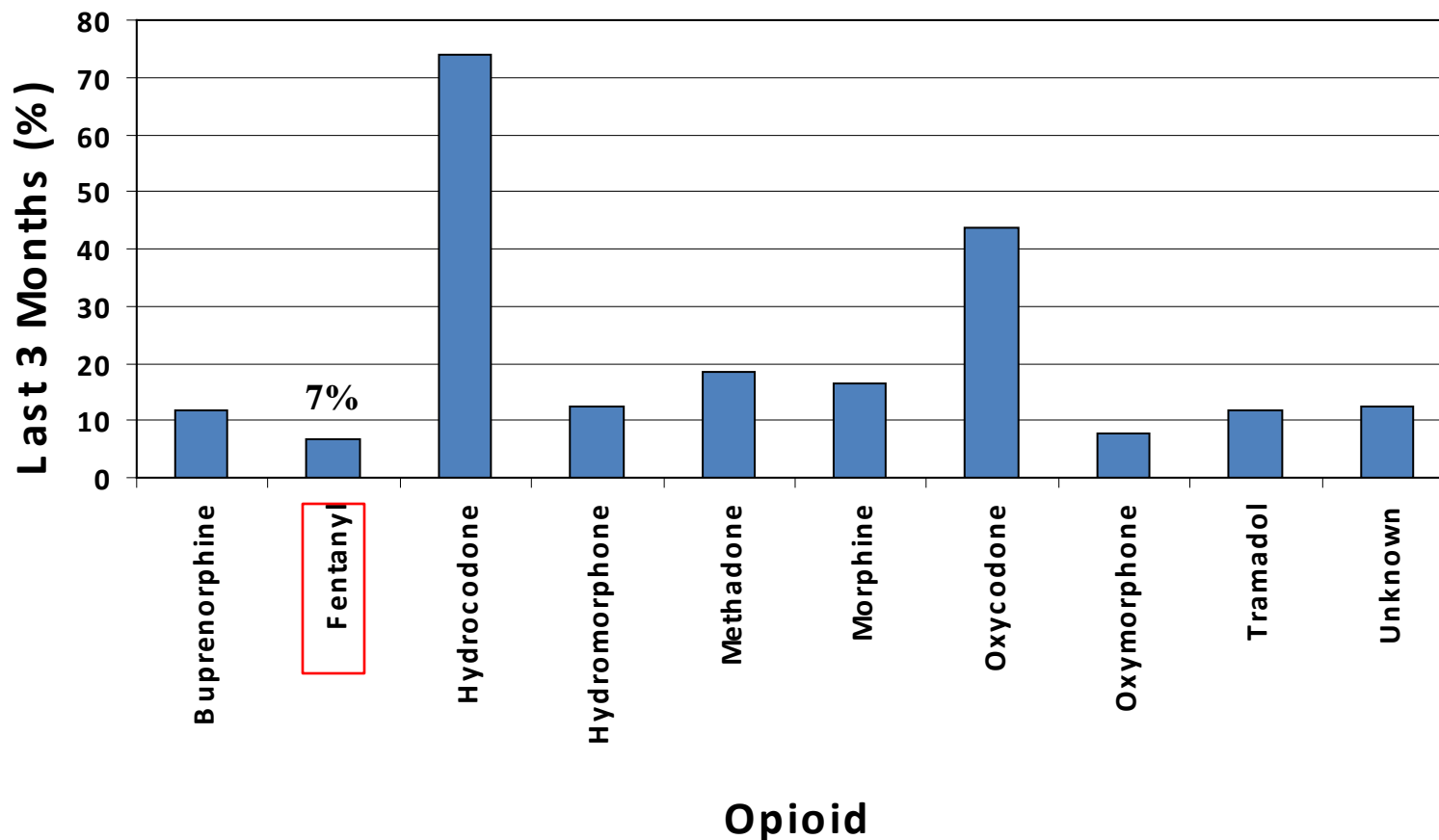
- Drug Diversion
- Criminal justice perspective

Opioid Treatment Programs

- Dependent or addicted patients
- Patient's perspective

RADARS System College Survey

Abuse or Misuse by Endorsers of Abuse





Fentanyl Overview

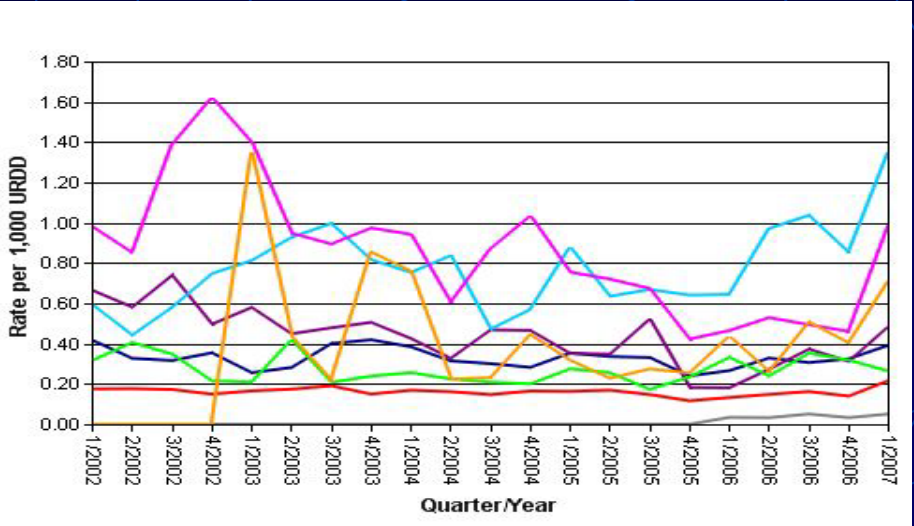
RADARS[®] System

Abuse/Misuse/Diversion Rates

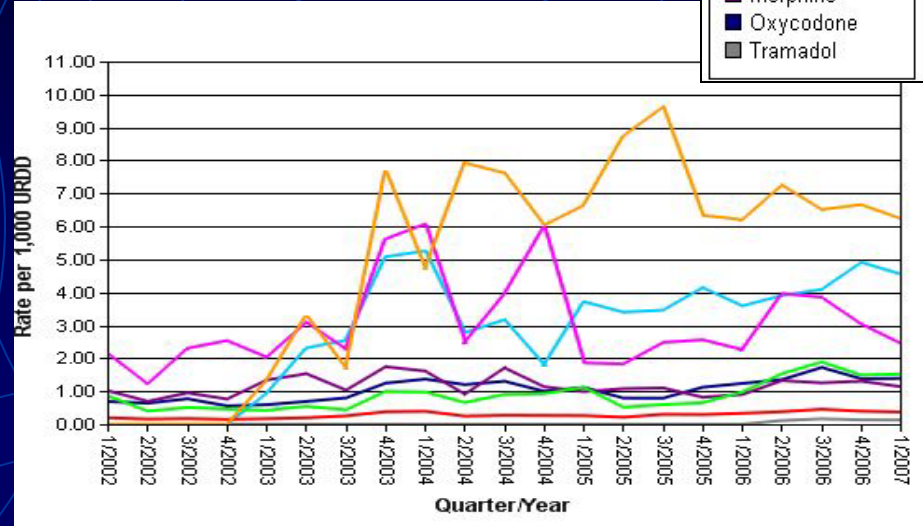
per 1,000 URDD

- Buprenorphine
- Fentanyl
- Hydrocodone
- Hydromorphone
- Methadone
- Morphine
- Oxycodone
- Tramadol

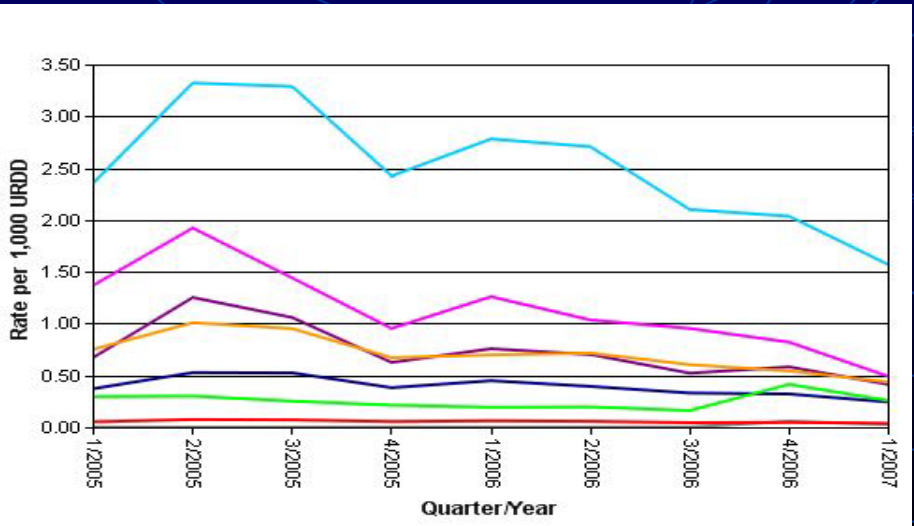
Drug Diversion



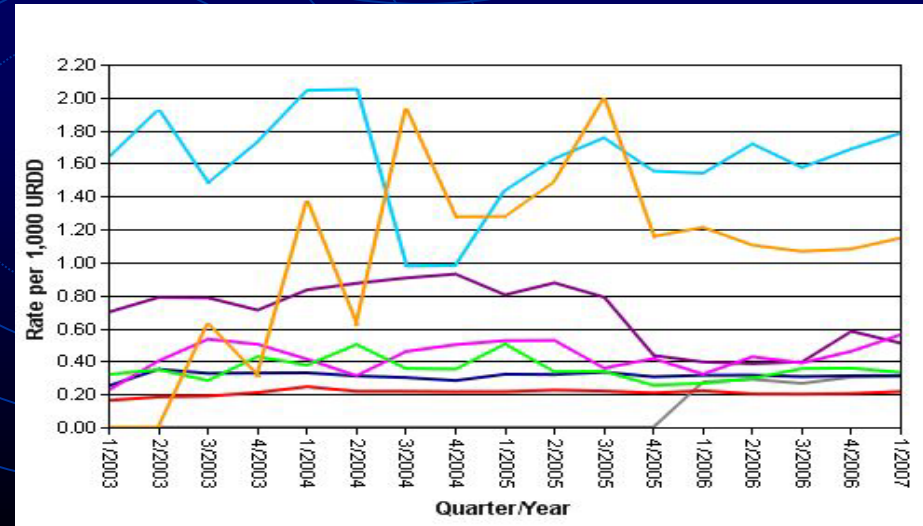
Key Informant



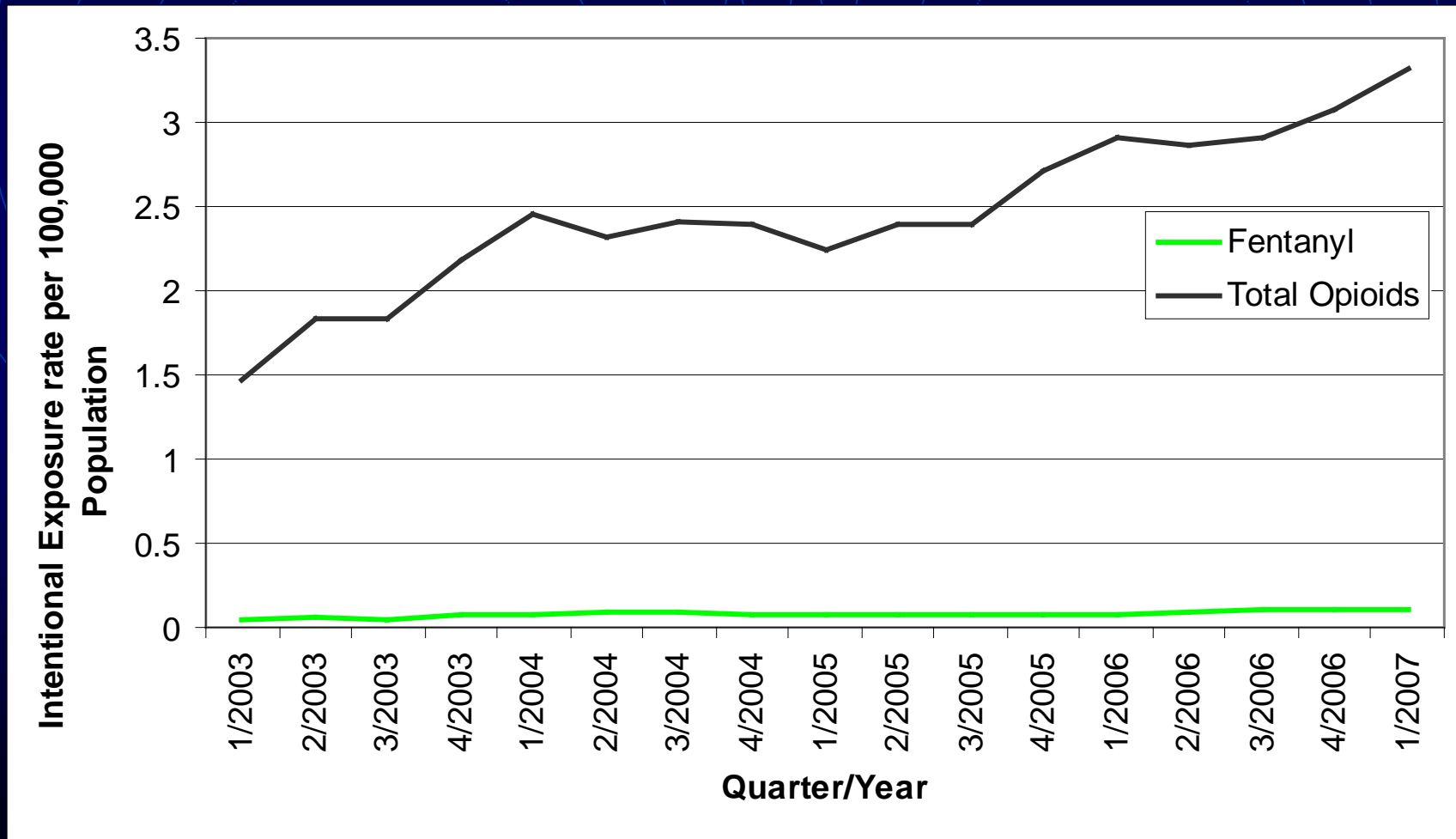
Opioid Treatment Program



Poison Center



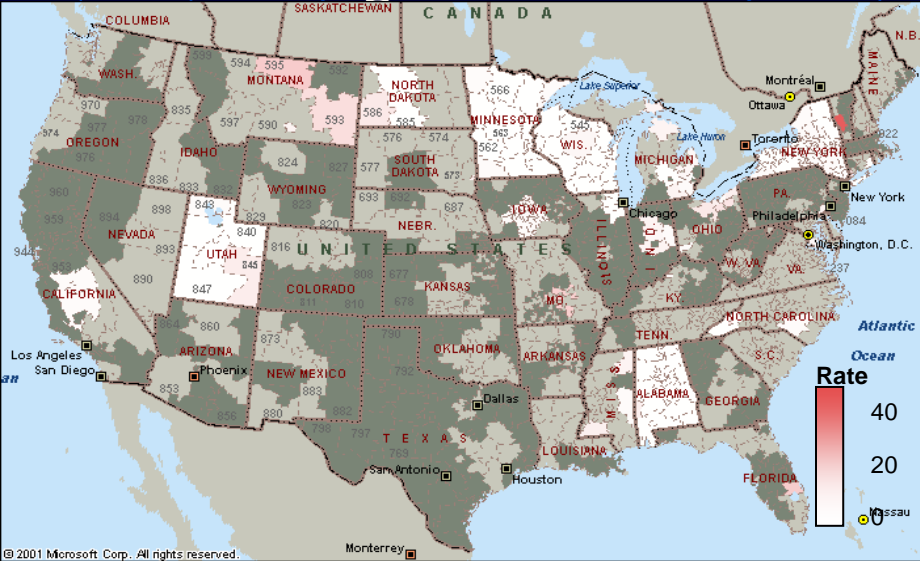
Intentional Exposure Rates from Poison Center Data per 100,000 Population



Fentanyl Rates per 1,000 URDD

1st Quarter 2007

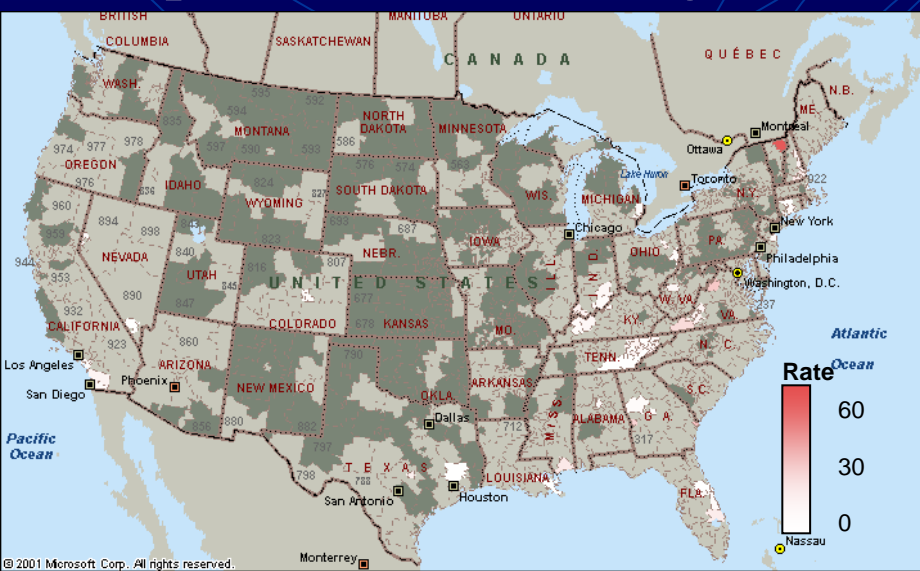
Drug Diversion



Key Informant



Opioid Treatment Program



Poison Center





Fentanyl Mortality Data

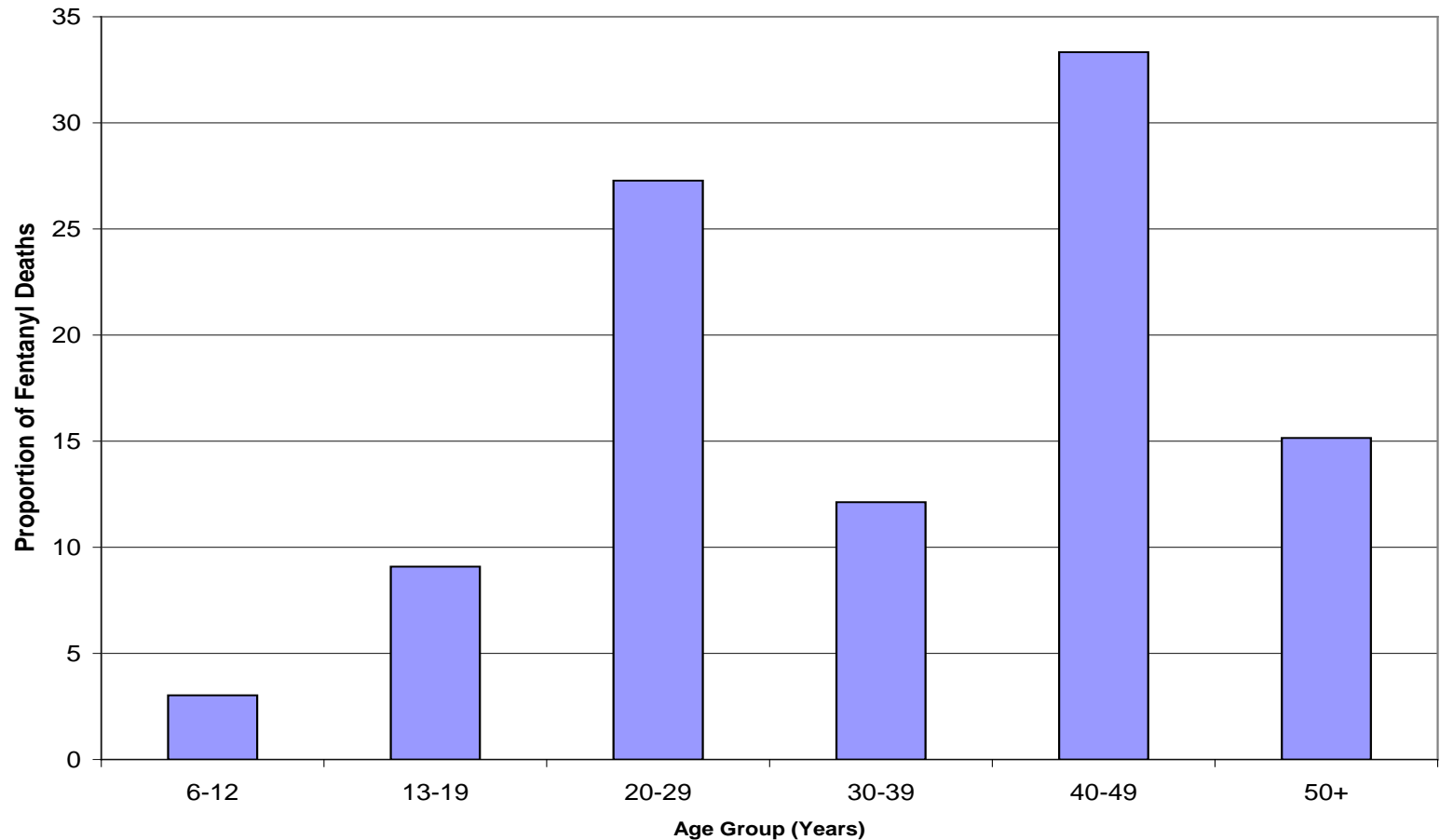
RADARS[®] System

RADARS System

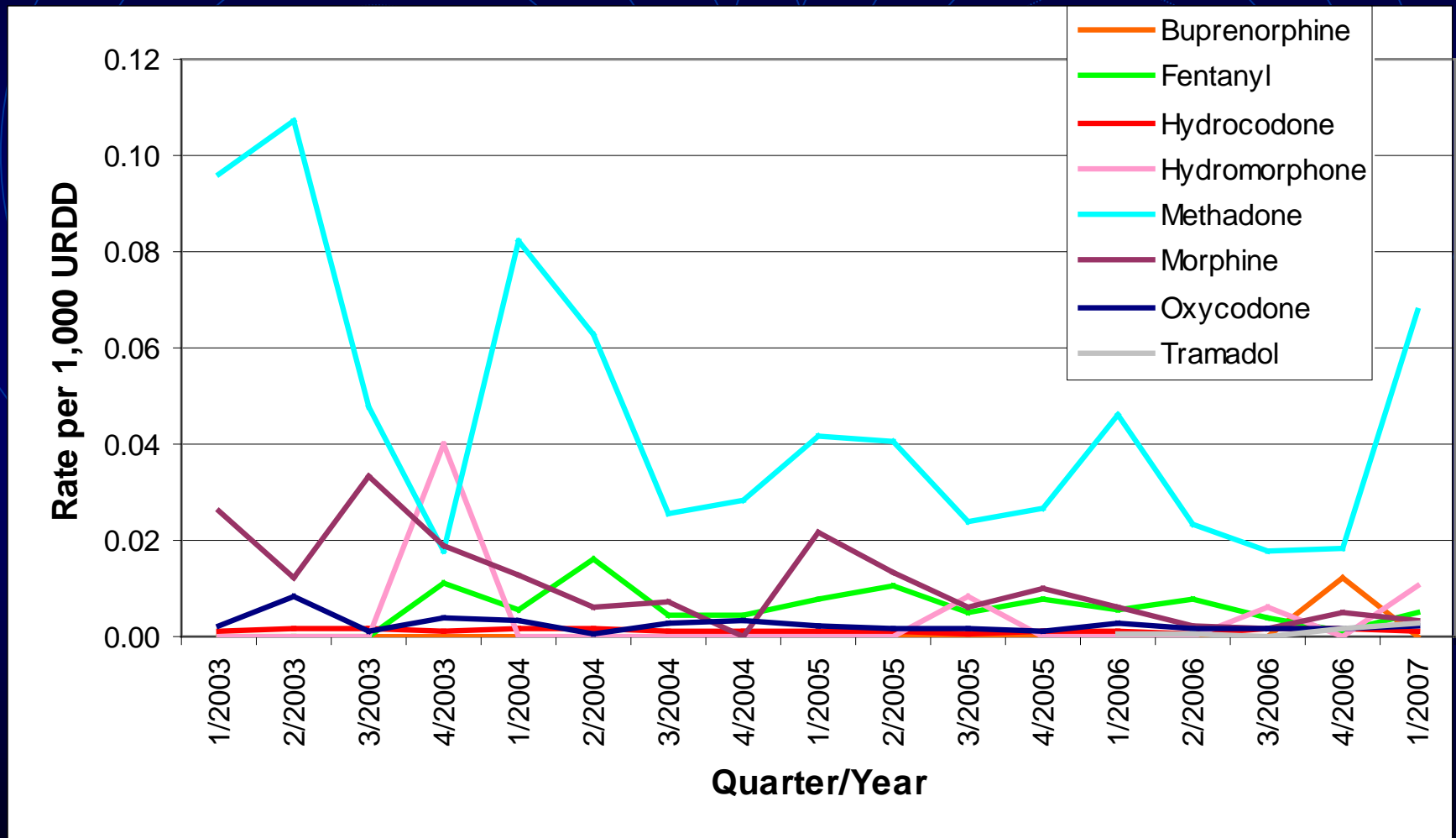
- Poison center “associated medical outcome”
- Data collected from 2003 – 2006
 - 11 of 60 US centers (18%) in 1st quarter 2003
 - 43 of 60 US centers (72%) in 4th quarter 2006
- 33 deaths associated with fentanyl exposures

Fentanyl Deaths by Age Group

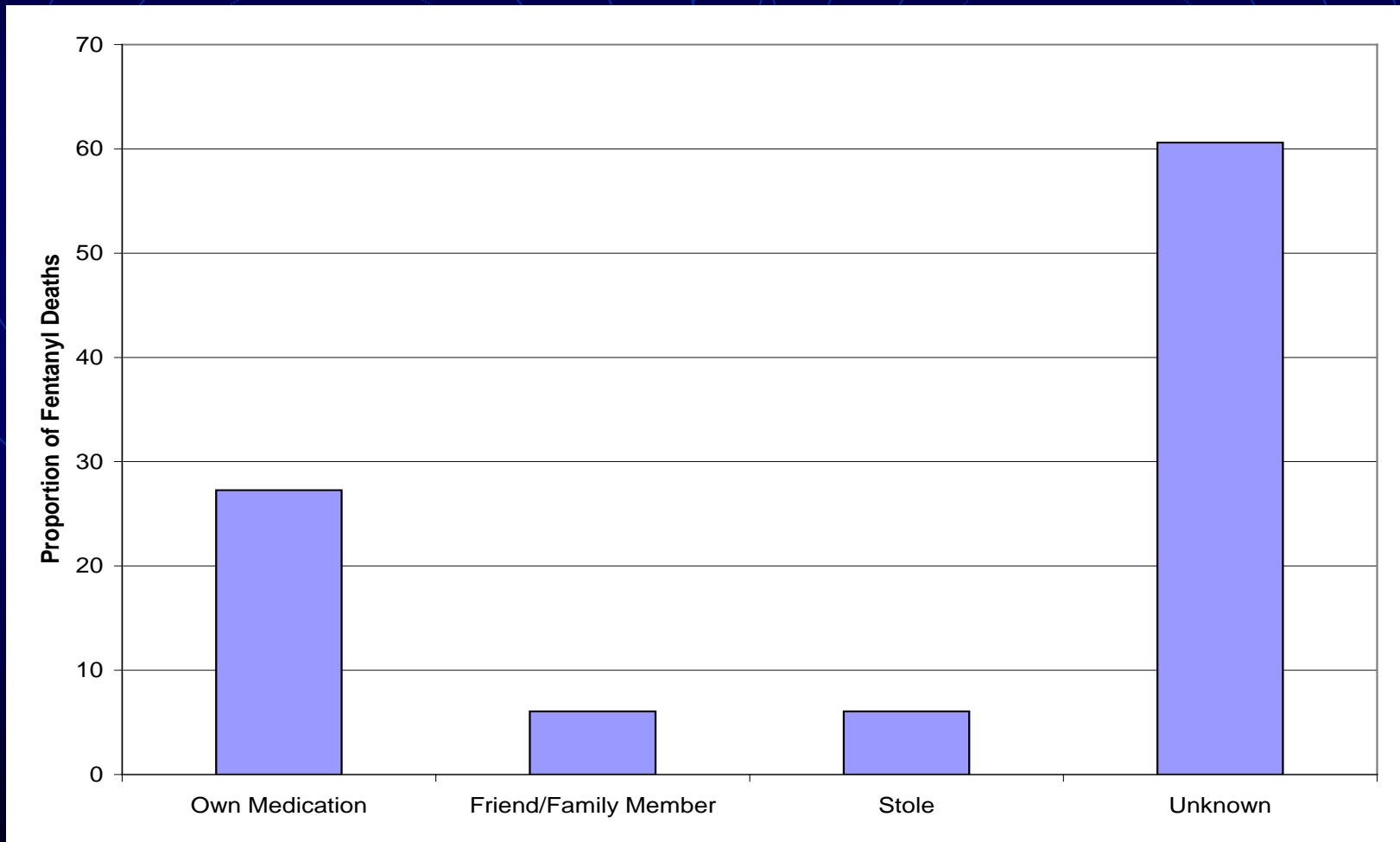
2003 – 2006



Death Rates per 1,000 URDD Reported to RADARS Poison Centers

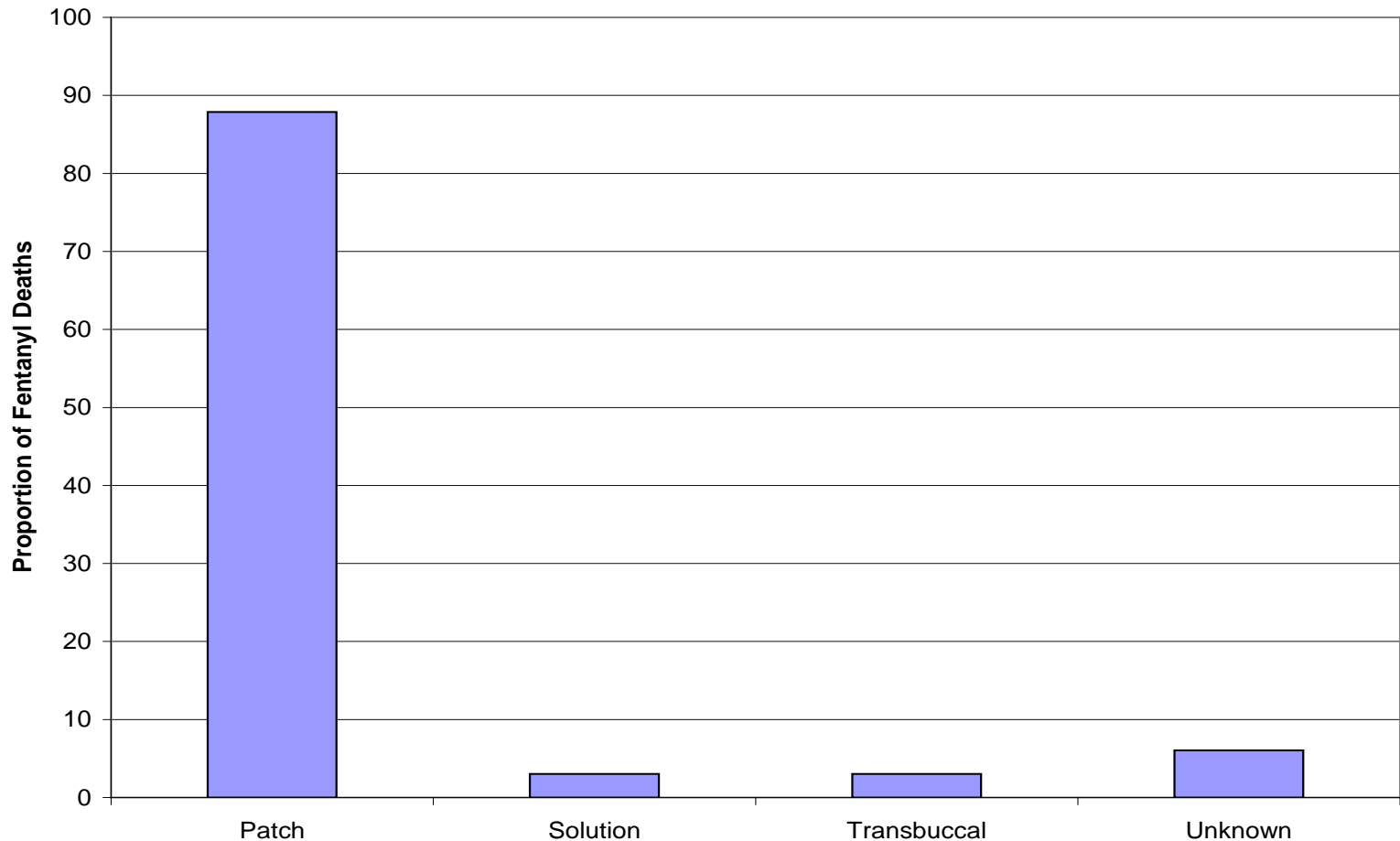


Reported Source of Fentanyl Deaths, 2003 – 2006



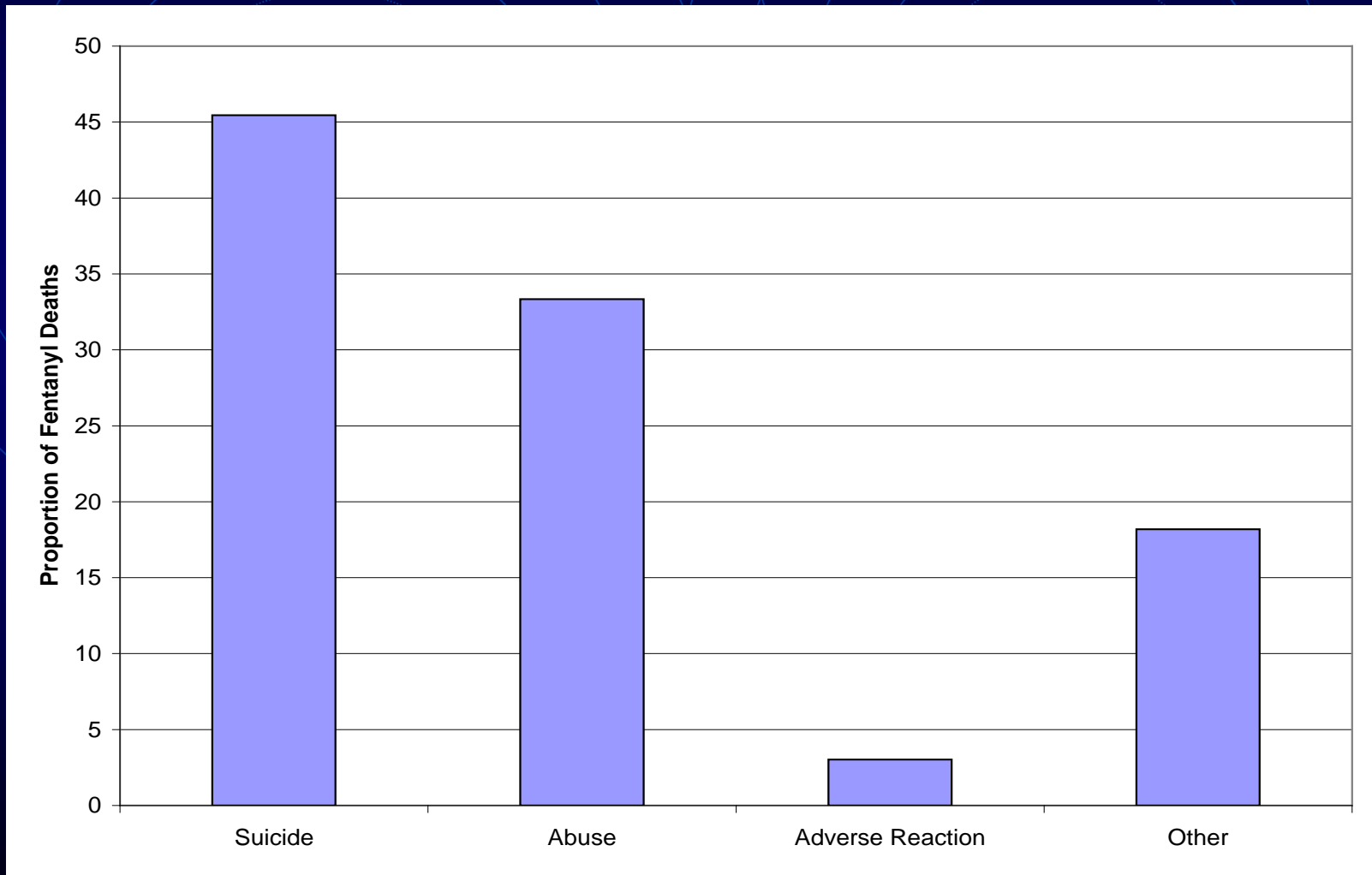
Fentanyl Formulations

Fentanyl Deaths, 2003 – 2006

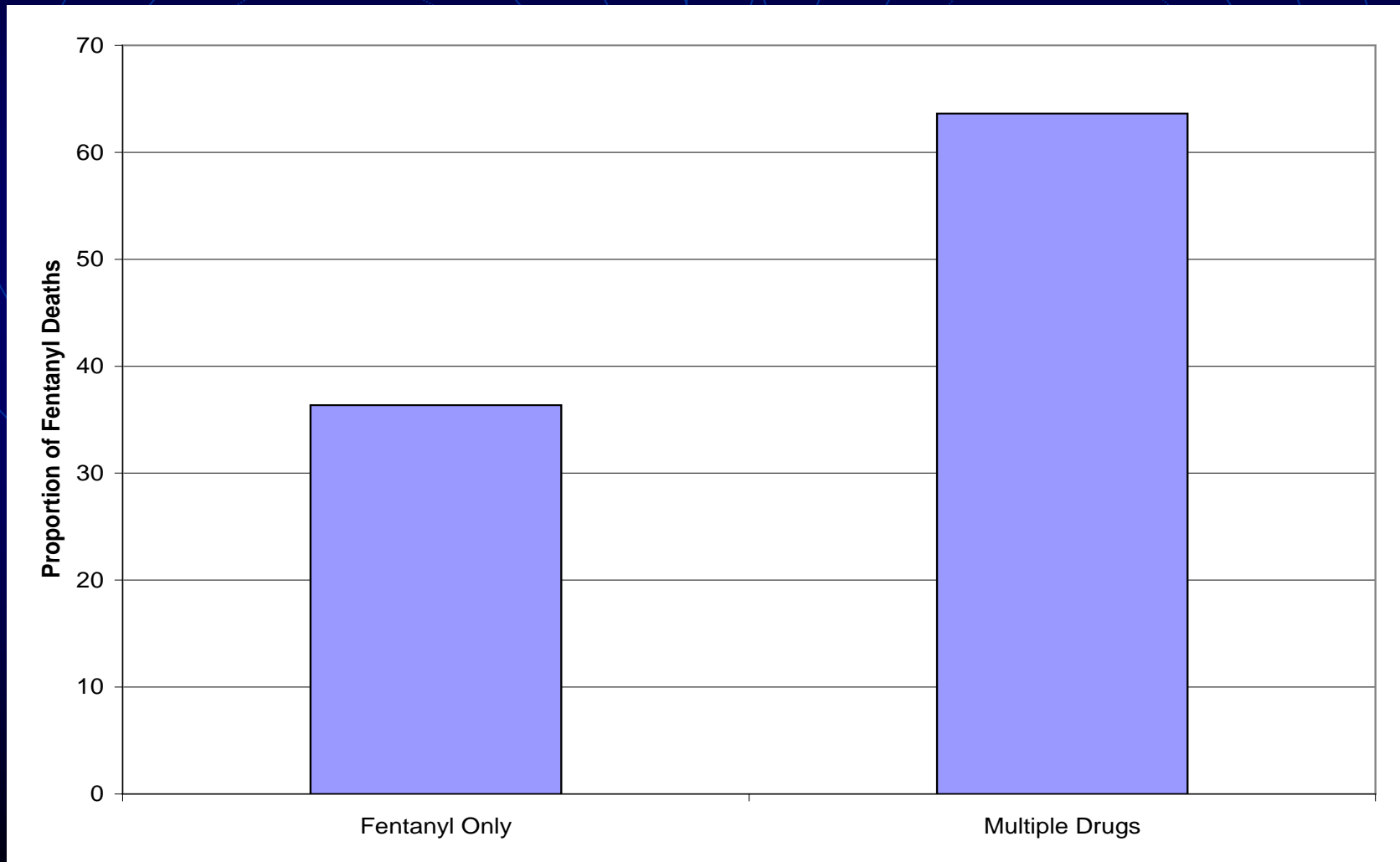


Exposure Reason

Fentanyl Deaths, 2003 – 2006



Involvement of Multiple Drugs Fentanyl Deaths, 2003 – 2006



Fentanyl Death Details

Example

Who Abuses Fentanyl?

Table 1
Opioid abuse among MMTP enrollees, by primary drug of choice

	Prescription opioid (<i>n</i> = 2174) (%)	
	Ever	Past 30 days
Heroin	33	13
Prescription opioids	100	99
Oxycodone, any formulation	89	79
CR-Oxycodone (e.g., OxyContin [®])	89	71
IR-Oxycodone (e.g., Percocet [®])	81	59
Hydrocodone (e.g., Vicodin [®])	88	67
Methadone	58	40
Morphine	59	29
Hydromorphone (e.g., Dilaudid [®])	37	16
Fentanyl	30	9
Buprenorphine	5	1
Ever injected primary drug	33	<i>n/a</i>

Opioid Rx Pediatric Exposures

RADARS Poison Centers 2003 - 2006

<i>Characteristic</i>	<i>Bup</i> (n=176)	<i>HC</i> (n=6,003)	<i>Fentanyl</i> (n=123)	<i>Oxycodone</i> (n=2,036)
Age Mean (SD)	2.1 (0.9)	2.3 (1.2)	2.0 (1.2)	2.1 (1.1)
Male N (%)*	99 (56.3)	3,232 (53.9)	64 (52.5)	1,081 (53.5)
Site N (%)				
Own Home	169 (96.0)	5,581 (93.0)	111 (90.2)	1,821 (89.4)
Other Home	3 (1.7)	335 (5.6)	4 (3.3)	155 (7.6)
Route N (%)				
Ingestion	175 (99.4)	5,993 (99.8)	77 (62.6)	2,020 (99.1)

Fentanyl Pediatric Deaths

**Age
(mo)**

M/F

Form

**Other drugs
available**

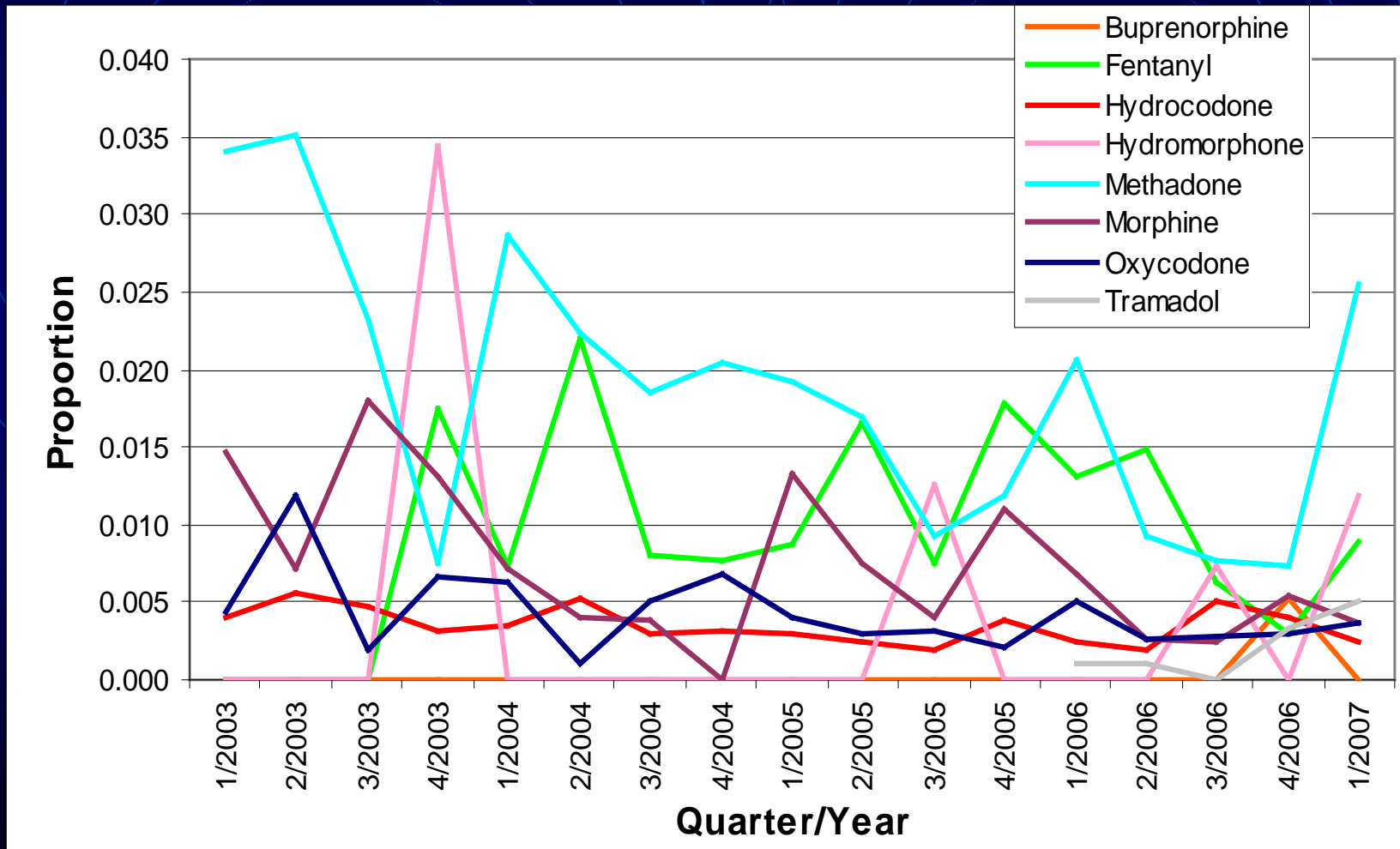
Circumstances

NONE

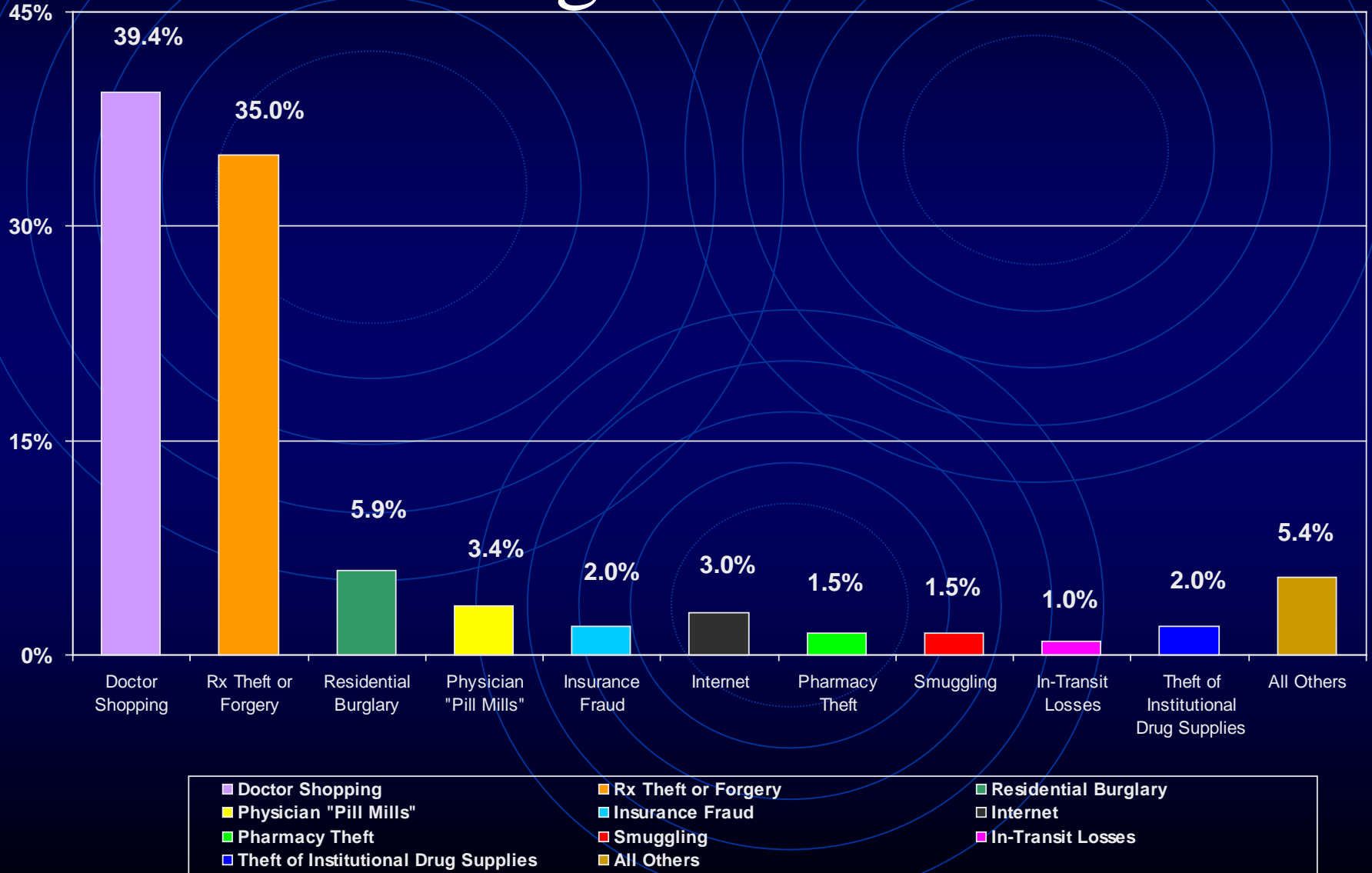
Summary

The background features three overlapping circles. Each circle contains several concentric dotted lines, creating a target-like or ripple effect. The circles are arranged in a triangular pattern, with one at the top left, one at the top right, and one at the bottom center.

Proportion of Fentanyl Total Exposures Associated with Death



Primary Source of Prescription Drug Diversion



Primary Source of Prescription Opioids

