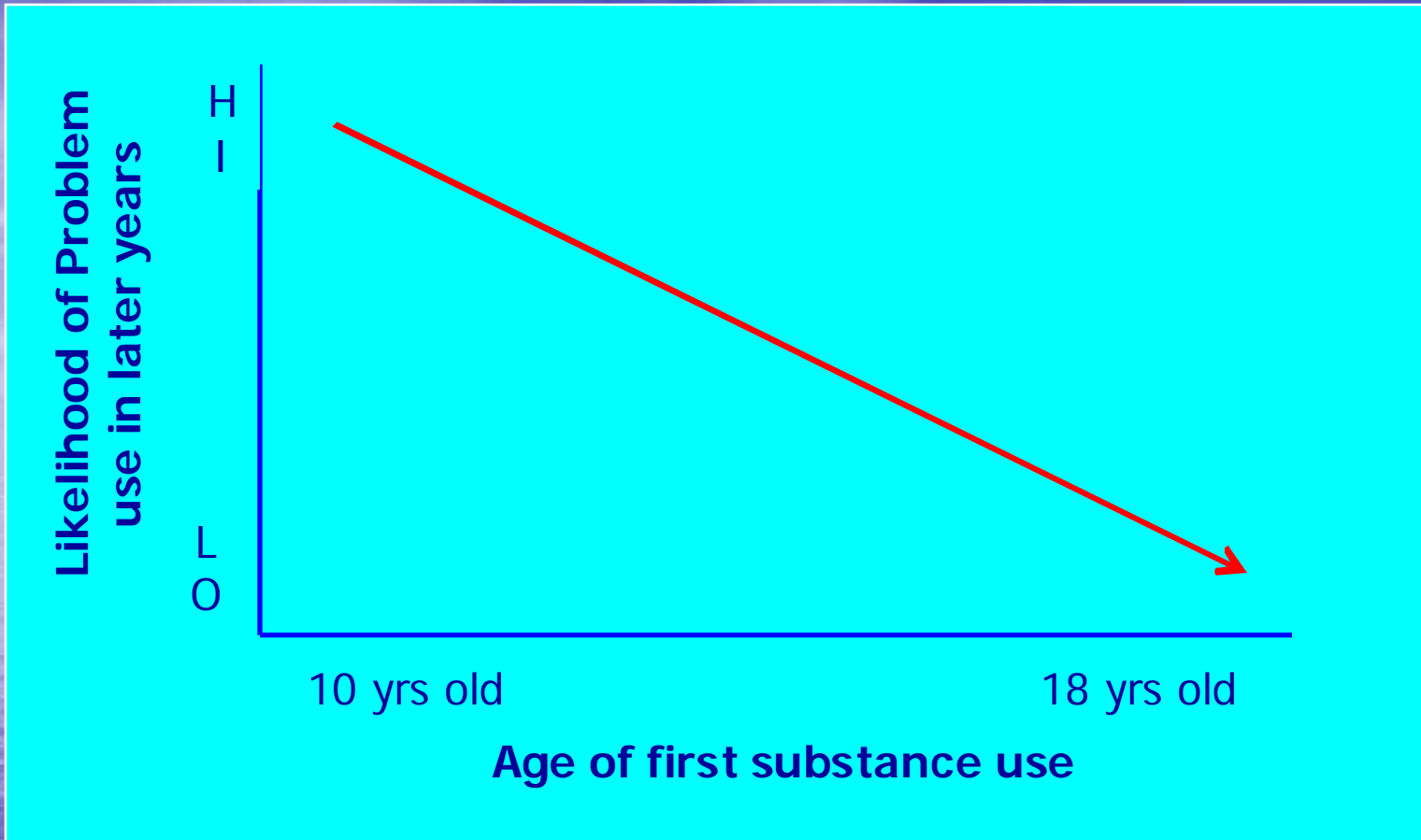


# An argument against using “age of first use” as an evaluation measure: A Florida case study

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REFERENCES: Grant and Dawson, 1997  
Andersen et. al., 2003  
Strunin et. al., 2007

New Florida DCF requirements in 2006 to measure early initiation.

What is the best measure of progress in delaying the onset of substance use among youth in a community?

# Average age of first use?

- Intuitively logical
- SAMHSA - Prevention NOM (Block Grant)
  - Alcohol
  - Cigarettes
  - Other tobacco
  - Marijuana
  - Other illegal drugs
- Pre-populated with data from NSDUH
  - Age 12-17

# BUT...

- Distorts true picture
- Skews true number downward
  - younger youth that have used are included
  - younger youth that have not used, but will before adulthood NOT included
  - Yet reported as “average age of first use among 12-17 year old youth”

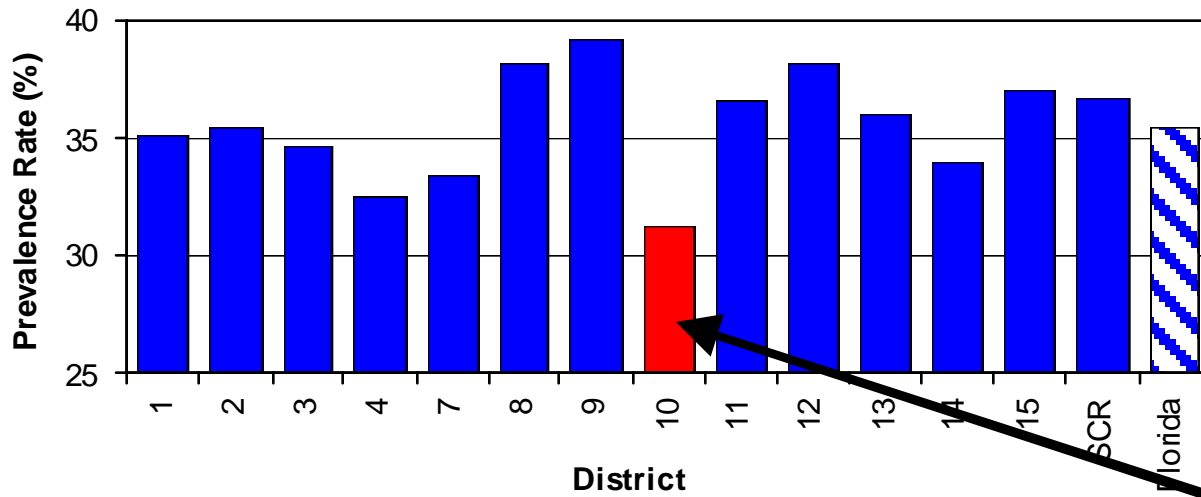
# Possible ages of first use, by current age

	12	13	14	15	16	17
$\leq 10$	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
11	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
12	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
13	White	Yellow	Yellow	Yellow	Yellow	Yellow
14	White	White	Yellow	Yellow	Yellow	Yellow
15	White	White	White	Yellow	Yellow	Yellow
16	White	White	White	White	Yellow	Yellow
17	White	White	White	White	White	Yellow

# Florida's initial solution (2006)

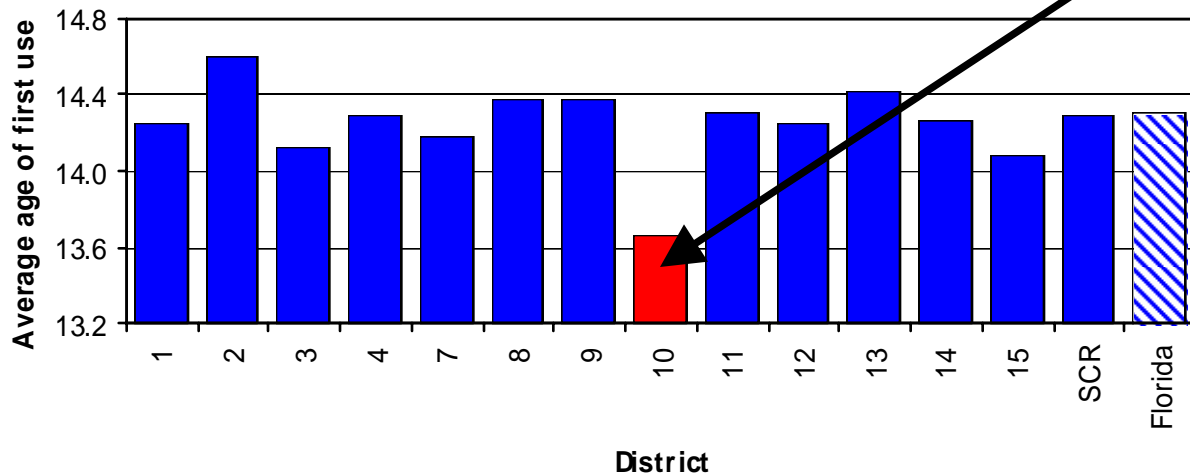
- Calculate average age of first use of HS Seniors only
  - Minimizes skewing of averages
  - Only "misses" those that will use for the first time between survey administration and graduation
- May take years to see changes
- Not a perfect measure, but better
- ONDCP – Drug Free Community Grants have similar reporting requirements at 3 levels

Past 30-day prevalence of alcohol or any illicit drug use



**Broward  
County**

Average age of first alcohol or marijuana use (12<sup>th</sup> graders)





# Broward County Irony

- Consistently among the lowest 30-day prevalence rates for all substances among Florida's 67 counties

AND

- By far the earliest average age of first use of alcohol or marijuana in 2006

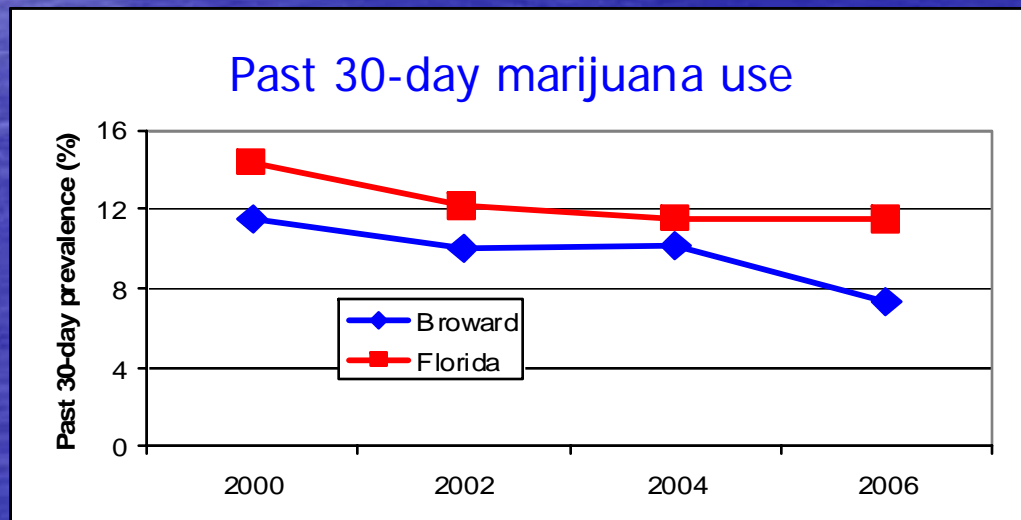
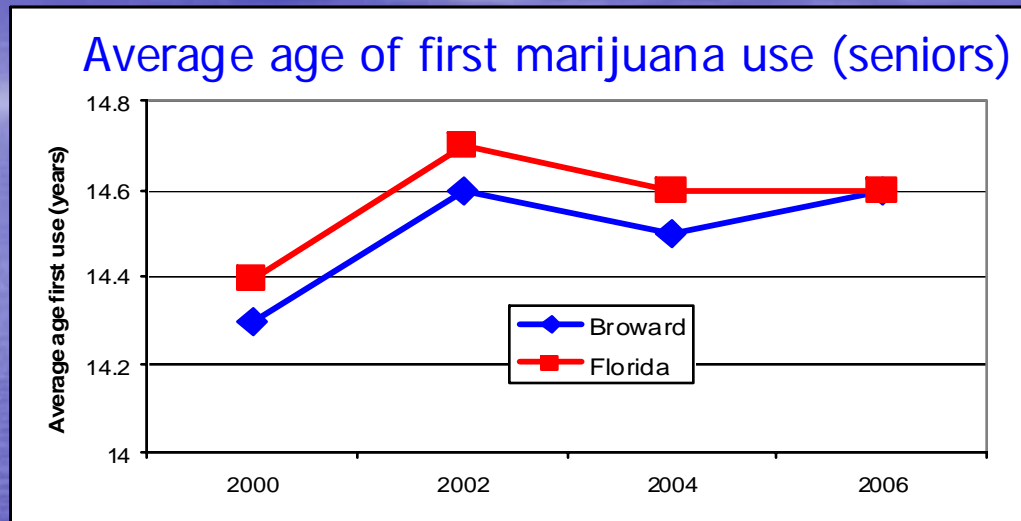
# WHAT'S HAPPENING



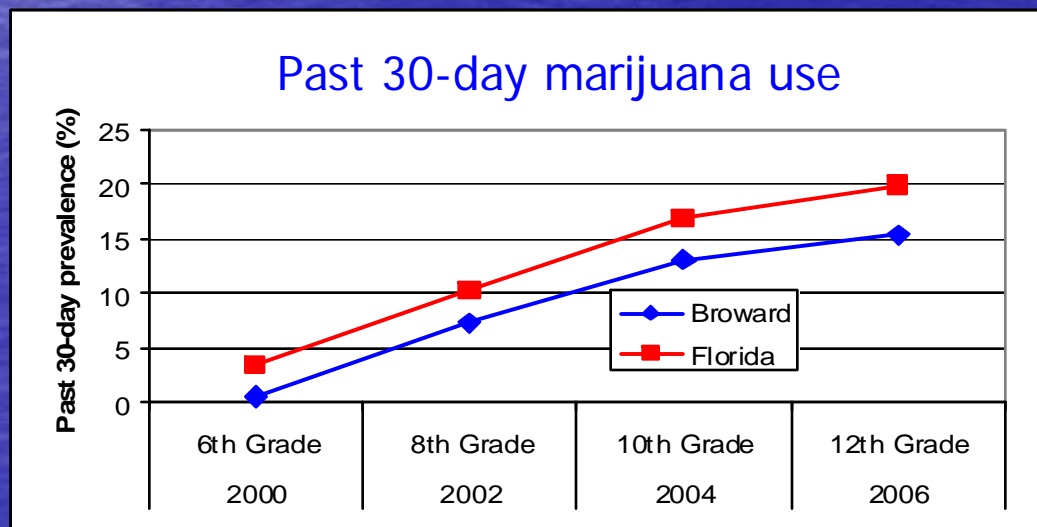
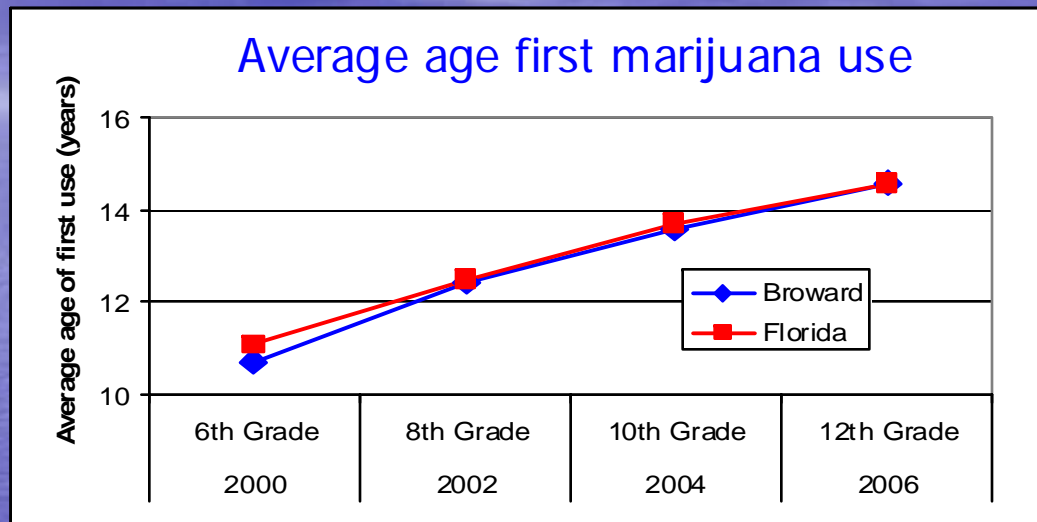
# Questions to answer

- How does Broward County compare to the state over time?
- If the cohort of students that were seniors in 2006 was followed from the time they were in 6<sup>th</sup> grade (2000), how does Broward County compare to the state?
- If we examine single-grade-level prevalence averages over time, how does Broward County compare to the state?
- Past 30-day marijuana use examined.

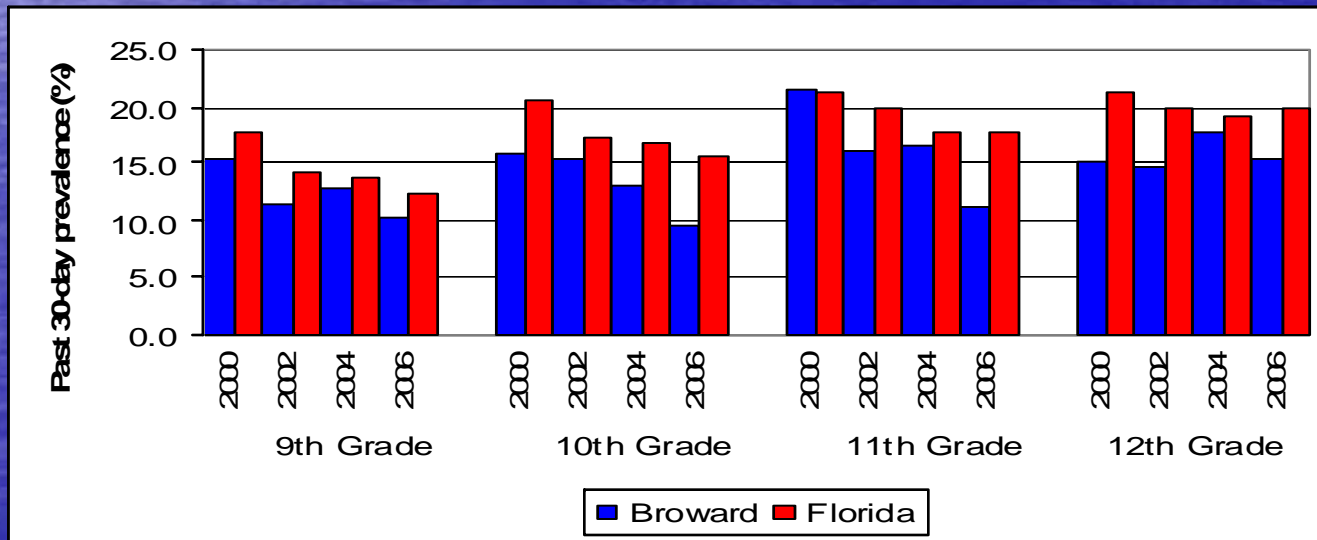
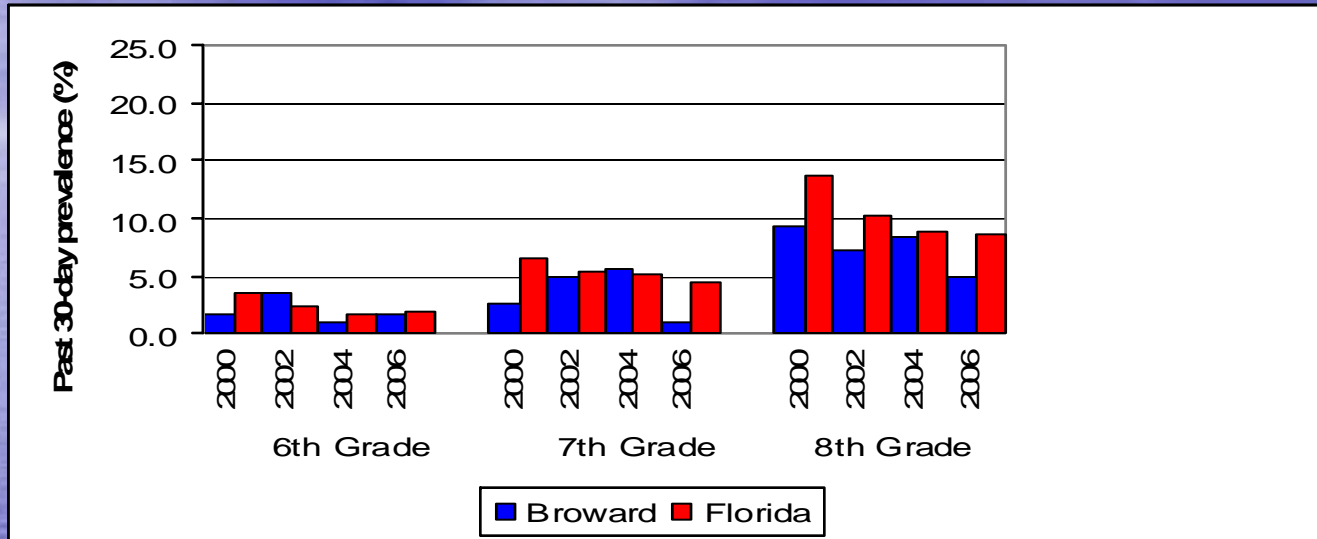
# Broward vs. Florida trend



# Single grade cohort trend comparison



# Grade level prevalence trend comparisons



# Conclusion

- Broward HS youth less likely to use or to initiate marijuana use than Florida HS youth
- The Broward Class of 2006 has consistently had an average age of first marijuana use similar to Florida youth as a whole, but has consistently shown a lower prevalence rate of use since 2000
- Although Broward students in grades 8 through 12 use at a lower rate than Florida youth as a whole, their average age of first use is lower

# Recommendations

- Calculate percentage of early initiators of substance use
  - Denominator: 14 years or older & in high school
  - Numerator: began using at age 13 or earlier
- Operationally defined as percent of high school students that began using in middle school or earlier

*NOTE: CSAP promotes state drug epidemiology workgroups through grants or contracts, and requires reporting of % of 9<sup>th</sup> – 12<sup>th</sup> grade students who report first use before age 13*



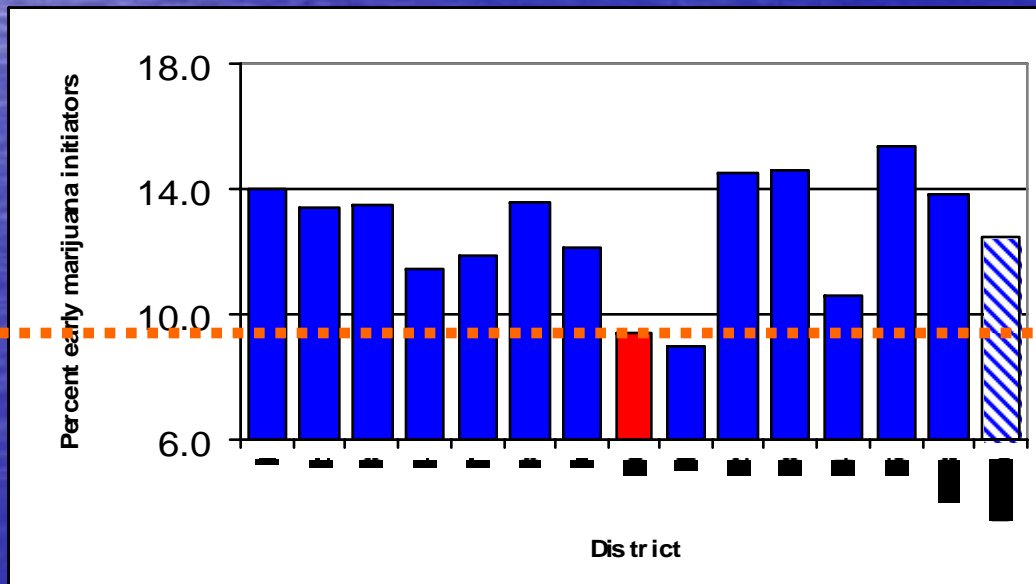
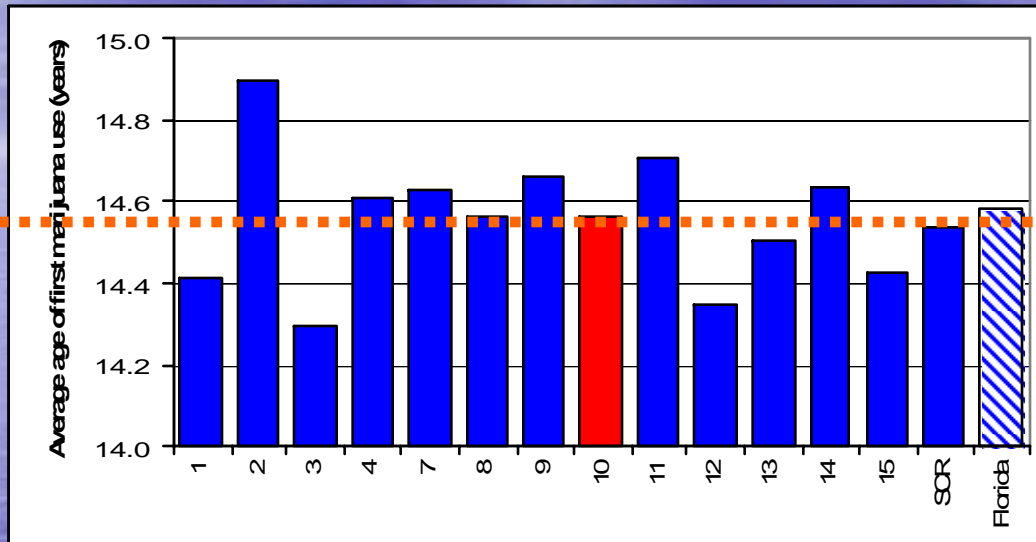
# An Extreme Hypothetical Example of the Difference Between 2 Measures

100 Seniors per county

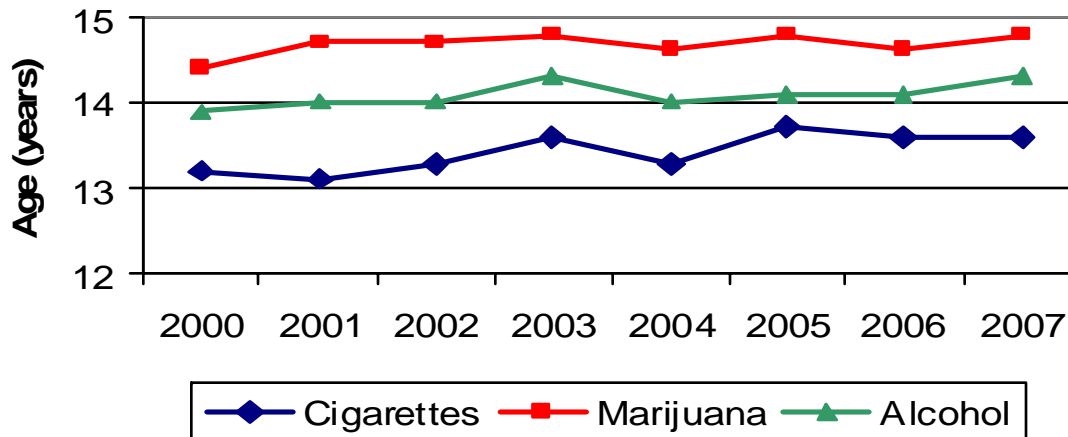
Age first use	County A # users	County B # users
10	2	2
11	4	4
12	6	6
13	10	10
14	15	0
15	10	0
16	12	0
17	15	0
TOTAL	74	22
N	100	100

	COUNTY A		COUNTY B	
Age first use	# users	users x age	# users	users x age
10	2	20	2	20
11	4	44	4	44
12	6	72	6	72
13	10	130	10	130
14	15	210	0	0
15	10	150	0	0
16	12	192	0	0
17	15	255	0	0
TOTAL	74	1073	22	266
N	100		100	
AVERAGE AGE 1st USE:	1073/74= 14.50 years old		266/22= 12.09 years old	
% EARLY INITIATORS:	22 early users/100= 22.0%		22 early users/100= 22.0%	
LIFETIME PREVALENCE:	74 users/100= 74%		22 users/100= 22%	

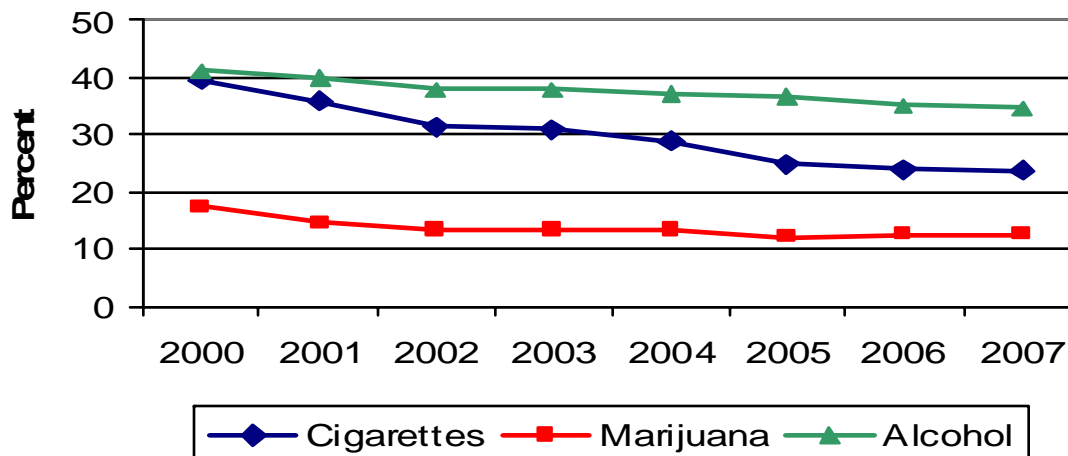
# Revised analysis by district



### Trend in Average Age of First Use of Various Substances by Florida Students (Grade 12)



### Trend in Percent of Florida High School Students that First Used Various Substances Before Age 14



# REFERENCES

Grant, BF, & Dawson, DA. (1997) Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *J of Subst Abuse*, 9: 103-110

Andersen, A, Due, P, Holstein, BE, & Iversen, L. (2003) Tracking drinking behaviour from age 15-19 years. *Addiction*, 98: 1505-1511.

Strunin, L, Edwards, EM, Godette, DC, & Heeren, T. (2007) Country of origin, age of drinking onset, and drinking patterns among Mexican American young adults. *Drug and Alcohol Dependence*, 91(2-3): 134-140.

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