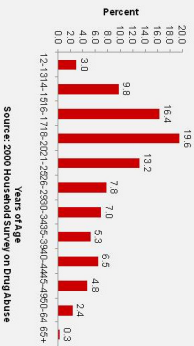


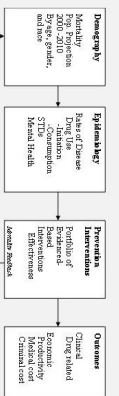
# A Demographic-Economic Model for Adolescent Substance Abuse and Crime Prevention

## DEMOGRAPHIC AND ECONOMIC MODEL OF PREVENTION PROGRAMS FOR DRUG ABUSE

Figure 1: Percentage Drug Use by Age Reported past month usage



Source: 2000 Household Survey on Drug Abuse



## DRUG USE IS INCREASING DRAMATICALLY FROM ADOLESCENTS TO YOUNG ADULTHOOD

### PRISON POPULATIONS EXPANDING

- From 2000-2006, the average annual change is 28,440 prisoners in state and federal incarceration
- 12.3% of all prisoners are in federal custody
  - Federal leadership

### INCARCERATION IS THE MOST IMPORTANT SOCIAL PROGRAM IN THE US

- Prison populations are increasing
- Admissions greater than releases
- Admissions dominated by new court commitments and parole violators
- Private prisons use increasing
- Persons under age 18 increased
- 1 in every 133 U.S. residents in prison or jail

### PUBLIC HEALTH APPROACH: UTILIZE SUBSTANCE ABUSE INTERVENTIONS TO ALLEVIATE CURRENT SOCIAL POLICY

- Health and crime are intertwined
- HIV/AIDS in this population is especially troubling
- Drug use, abuse and dependency is associated with incarceration
- Evidence-based treatments are available!

## INCARCERATION OF BLACK MALES, 2006

- An estimated 4.8% of black men were in prison or jail as compared to 1.9% of Hispanic men and 0.7% of white men.
- More than 11% of black males age 24 to 34 were incarcerated.
- More black men than white men
  - 836,000 versus 718,100
- Blacks more than 41% of all incarcerated
- 6.5 times the rate of white men

## METHODS I

- Obtain census projection of 2000 to 2010 and aggregate into three age groups by African American and White:
  - Readily available download from the web.

Table 10: Census projection of African American population by the major race, sex, 1990-2010

Year	15 to 17 years	18 to 19 years	20 to 24 years	25 to 29 years
2000	1,012,000	1,012,000	1,012,000	1,012,000
2001	1,012,000	1,012,000	1,012,000	1,012,000
2002	1,012,000	1,012,000	1,012,000	1,012,000
2003	1,012,000	1,012,000	1,012,000	1,012,000
2004	1,012,000	1,012,000	1,012,000	1,012,000
2005	1,012,000	1,012,000	1,012,000	1,012,000
2006	1,012,000	1,012,000	1,012,000	1,012,000
2007	1,012,000	1,012,000	1,012,000	1,012,000
2008	1,012,000	1,012,000	1,012,000	1,012,000
2009	1,012,000	1,012,000	1,012,000	1,012,000
2010	1,012,000	1,012,000	1,012,000	1,012,000

Table 11: Census projection of White population by the major race, sex, 1990-2010

Year	15 to 17 years	18 to 19 years	20 to 24 years	25 to 29 years
2000	1,012,000	1,012,000	1,012,000	1,012,000
2001	1,012,000	1,012,000	1,012,000	1,012,000
2002	1,012,000	1,012,000	1,012,000	1,012,000
2003	1,012,000	1,012,000	1,012,000	1,012,000
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2007	1,012,000	1,012,000	1,012,000	1,012,000
2008	1,012,000	1,012,000	1,012,000	1,012,000
2009	1,012,000	1,012,000	1,012,000	1,012,000
2010	1,012,000	1,012,000	1,012,000	1,012,000

## METHOD II

- Obtain population of 18 to 19 year olds in prison and jail
- Bureau of Justice Statistics at Mid year 2007
  - various hard copy issues
- Project 2008 to 2010 using least squares trendline in EXCEL

## METHOD III

- Obtain data on delinquent youth in residential placement from National Center for Juvenile Justice
- Have data for 2001, 2003, 2006
- Extrapolate yearly rate of change
- Combine with 18 - 19 year olds in jail and prison to get incarceration for this age group 15-19
- Some 18 year olds are in the juvenile system.
- No adjustment for small numbers of youth in adult prison. (2,000 or so).

Table 10: African American Male, Residential, State or Federal Prison, Jail

Year	15 to 17	20 to 24	25 to 29
2000	88,238	124,800	182,200
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2002	88,238	124,800	182,200
2003	88,238	124,800	182,200
2004	88,238	124,800	182,200
2005	88,238	124,800	182,200
2006	88,238	124,800	182,200
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2005	88,238	124,800	182,200
2006	88,238	124,800	182,200
2007	88,238	124,800	182,200
2008	88,238	124,800	182,200
2009	88,238	124,800	182,200
2010	88,238	124,800	182,200

## METHOD IV

- Select an intervention appropriate for youth
- Multisystemic Therapy
  - Aos, Washington Institute of Public Policy found it cost-effective for crime reduction
  - Meta-analysis by Curtis et al 2004
- Short and long-term effectiveness by Henggeler et al. 1999 and 2002
- Success rate is 51% for drugs and crime.

## RESULTS

- Scenario
- Treat 1,000 youth per year
- Assume the criminal justice system does not increase the in flow of delinquents
- Subtract the successes from the population to be found in residential treatment

Table 12: African American Male, Delinquent Youth in Multisystemic Therapy Treatment (2007 estimate)

Year	Number treated	Successful	Cost	Net Benefit
2000	30,297	1,000	\$4,651,989	\$1,421,136
2001	30,297	1,000	\$4,651,989	\$1,421,136
2002	30,297	1,000	\$4,651,989	\$1,421,136
2003	30,297	1,000	\$4,651,989	\$1,421,136
2004	30,297	1,000	\$4,651,989	\$1,421,136
2005	30,297	1,000	\$4,651,989	\$1,421,136
2006	30,297	1,000	\$4,651,989	\$1,421,136
2007	30,297	1,000	\$4,651,989	\$1,421,136
2008	30,297	1,000	\$4,651,989	\$1,421,136
2009	30,297	1,000	\$4,651,989	\$1,421,136
2010	30,297	1,000	\$4,651,989	\$1,421,136

## CONCLUSION

- Financing MT could be helpful for alleviating society's health and crime problems.
- Demographic and economic planning must be combined for rational budgeting.
- Cost-benefit and Effectiveness must be established and extrapolated.
- More attention to outcome measurements of clinical and effectiveness trials to make them useful for policy purposes.