March, 2012

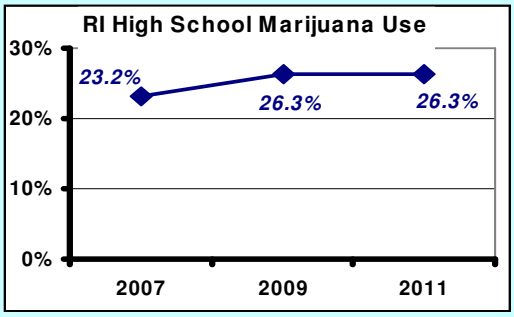
Rhode Island Data Brief

Marijuana Use & Other High School Health Risks (2011)

One in four RI high school students (26%) uses marijuana.[1] This Brief examines if these students are in greater jeopardy from other health risks than their non-using peers (Chart 1), and whether those risks have improved or worsened over time (Chart 2). Twenty measures are evaluated,[2] comprising seven areas of vulnerability (drugs and alcohol, injury, mental health, sex, tobacco, violence, and weight). The findings are intended to inform interested parties and stimulate further research.

In this Brief, the relationship between marijuana use and other health risks is one of association, not causation (e.g., marijuana users are twice as likely to be victims of rape, but using marijuana not cause a student to be sexually assaulted). In the text, only those differences in values (over time or between users and non-users) that are statistically 'significant' at the 95% confidence level are noted.[3] Lastly, with the exception of the 'lesbian, gay, or bisexual' measure, all others are unfavorable indicators, so lower/declining values are preferred.

Key Findings



Marijuana use is strongly associated with other higher health risks.[4]

Students who use marijuana are at greater risk than their non-using peers on 17 (of 20) measures.

From 2007-2011, seven measures for students who use marijuana improved significantly and no measure worsened.

Drugs & Alcohol: Marijuana users are almost five times more likely to abuse legal (prescription and 'over-the-counter') drugs (38% vs. 8%). Alcohol drinking among marijuana users improved from 84% to 72% (2007 to 2011), but remained over three times higher in 2011 (72% vs. 20%).

Injury: High schoolers using marijuana are more likely to not wear bike helmets (92% vs. 72%) or seat belts (19% vs. 6%). Drinking and driving among marijuana users improved from 25% to 17% (2007 to 2011), but remained significantly higher in 2011 (17% vs. 2%).

Mental Health: Students who use marijuana experience a higher rate of long-term (6+ months) emotional disability (20% vs. 13%), and depression (33% vs. 21%). These students are also 2.5 times more likely to attempt suicide (15% vs. 6%)

Sex: Marijuana users are more likely to identify as lesbian, gay or bisexual (11% vs. 6%). They are almost three times more likely to be sexually active (56% vs. 20%), and twice as likely to engage in unprotected sex (9% vs. 4%).

Tobacco: Smoking rates improved among marijuana users (48% to 34%, 2007 to 2011), but remained far above the rate for non-users in 2011 (34% vs. 4%). Heavy smoking (more than 10 cigarettes a day) is also much higher (3% vs. 0.2%). The use of any tobacco product (cigarettes, cigars, smokeless tobacco) among users improved from 60% to 51% (2007 to 2011), but remained higher in this group in 2011 (51% vs. 7%).

Violence: High schoolers who use marijuana are more likely to fight (41% vs. 17%), and three times more likely to experience dating violence (16% vs. 5%). The incidence of rape among users improved from 18% to 11% (2007 to 2011), but remained twice as high for this group in 2011 (11% vs. 5%).

Weight: Obesity rates are not significantly different for marijuana users versus non-users, nor are there significant differences for 'Inadequate Exercise' or 'Poor Nutrition.'

Marijuana use is strongly correlated with other higher health risks.[4] One in four RI high school students uses marijuana, and that rate has not improved in the near-term. While marijuana use does not cause a student to engage in other risky behaviors, it does place them in a peer group in which these behaviors are much more likely to occur.

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1 *Students self-reported using marijuana one or more times in the past month.*

2 *Data are from RI's Youth Risk Behavior Survey, part of a biennial national survey of public high school students on the major causes of disease and injury morbidity and mortality. For more information contact Bruce Cryan, 401-222-5111, www.health.ri.gov/data/youthriskbehaviorsurvey/.*

3 *As the RI-YRBS is a sample survey, if the 95% confidence intervals of two values do not overlap, one may conclude (with 95% certainty) there was a 'real' difference between the two values (i.e., the difference was not likely due to sampling bias).*

4 *The Phi Coeffiicient (r_ϕ) measuring the correlation of marijuana use & higher health risks is 0.853 ('0' is no correlation and '1' is perfect correlation).*

Chart 1: RI 2011 High School Health Risks by Marijuana Use

** statistically significant differences*

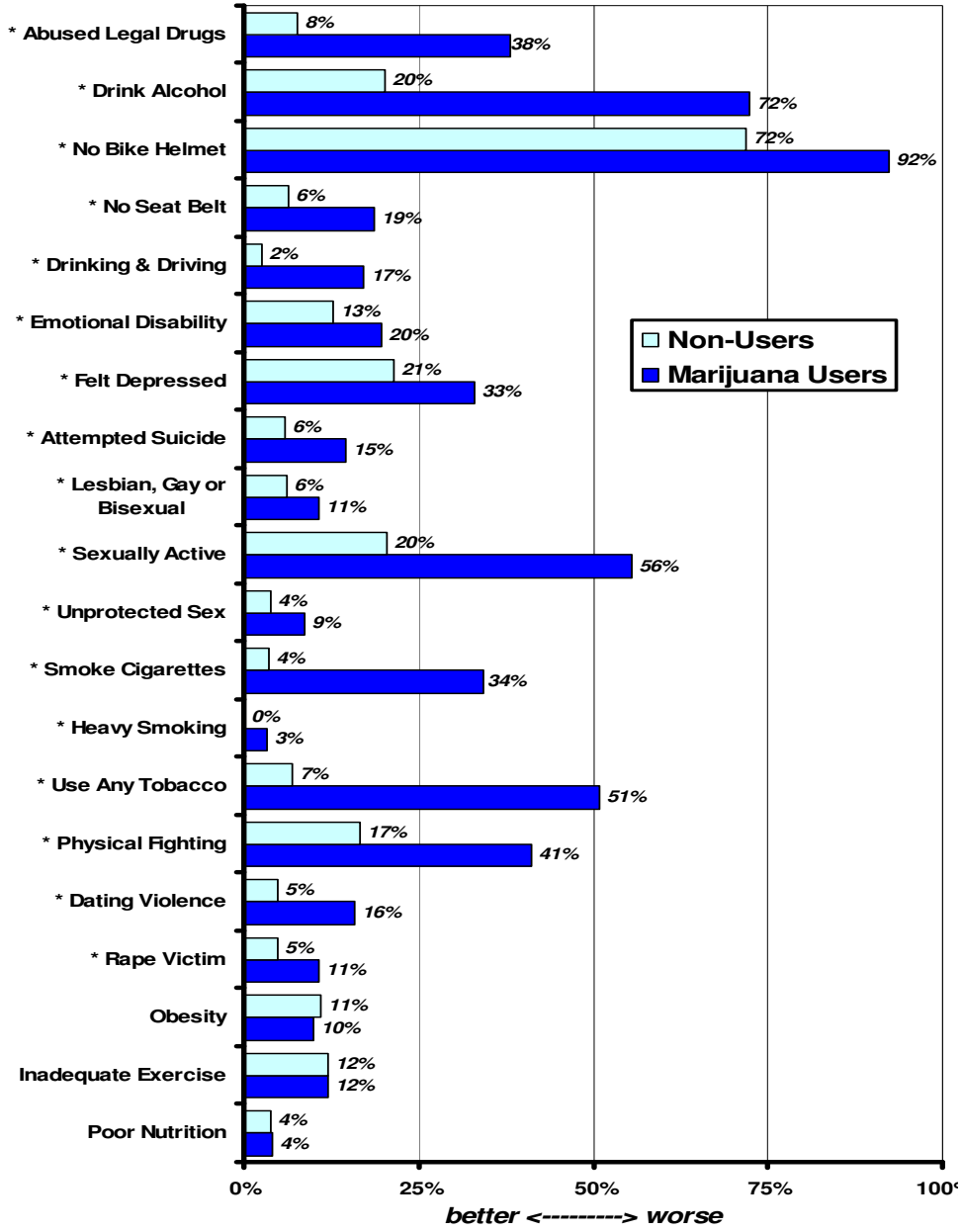
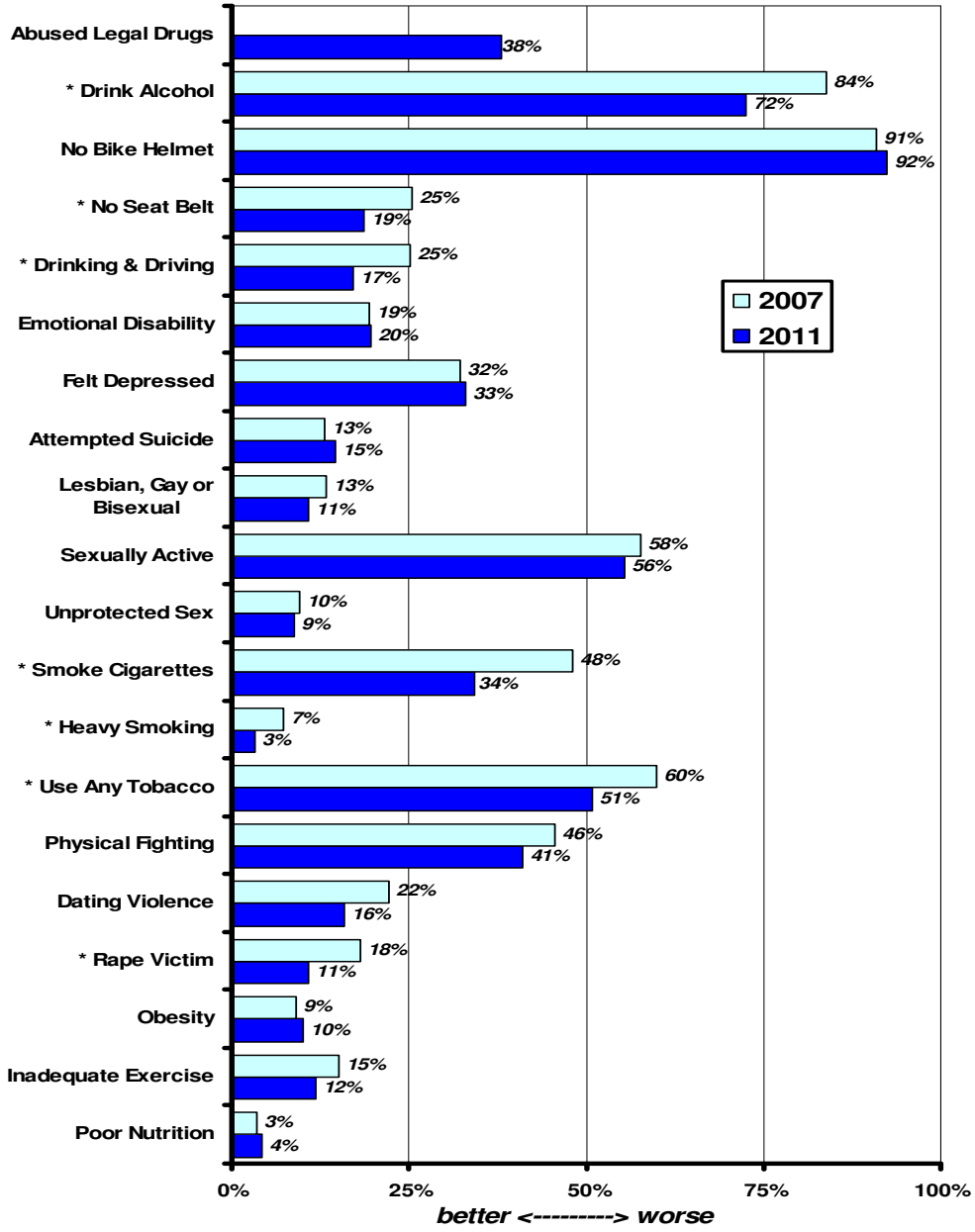


Chart 2: 2007 & 2011 RI Health Risks for Students Who Use Marijuana

** statistically significant changes*



DRUG & ALCOHOL MEASURES: ***Abused Legal Drugs*** *(abused prescription and/or 'over-the-counter' drugs 1+ times, ever);* ***DRINK ALCOHOL*** *(1+ days, past mo.);* ***INJURY MEASURES:*** ***No Bike Helmet*** *(never or rarely wore, past yr.);* ***No Seat Belt*** *(never or rarely wore, past yr.);* ***Drinking & Driving*** *(1+ times, past mo.);* ***MENTAL HEALTH MEASURES:*** ***Emotional Disability*** *(for 6+ mos.);* ***Felt 'Depressed'*** *(for 2+ weeks, past yr.);* ***Attempted Suicide*** *(1+ times, past yr.);* ***SEX MEASURES:*** ***Lesbian, Gay or Bisexual*** *(sexual self-identity);* ***Sexually Active*** *(1+ partner, past 3 mos.);* ***Unprotected Sex*** *(no protection, last encounter);* ***TOBACCO MEASURES:*** ***Smoke Cigarettes*** *(on 1+ days, past mo.);* ***Heavy Smoking*** *(over 10 cigarettes per day, past mo.);* ***Use Any Tobacco*** *(used chewing tobacco, snuff, dip, or smoked cigars or cigarettes on 1+ days, past mo.);* ***VIOLENCE MEASURES:*** ***Physical Fighting*** *(1+ times, past yr.);* ***Dating Violence*** *(physically abused by partner in the past yr.);* ***Rape Victim*** *(forced into sexual intercourse, ever);* ***WEIGHT MEASURES:*** ***Obesity*** *(over the 95th percentile for body mass index);* ***Inadequate Exercise*** *(60+ min. of exercise on 0 days, past wk.);* ***Poor Nutrition*** *(no fruit or vegetables, past wk.)*