

The banner features a blue background with a stylized yellow and red star on the left and the Great Seal of the State of Arizona on the right. The text "Arizona Substance Abuse Partnership" is written in white, bold, sans-serif font.

# Arizona Substance Abuse Partnership

## Data-Driven Decisions: Interactive Training and Technical Assistance

**Jeanne Blackburn**

**Substance Abuse Policy, Governor's Office for Children, Youth and Families**

**Shana Malone**

**Statistical Analysis Center, Arizona Criminal Justice Commission**

**Kurt Hoffman**

**Southwest Interdisciplinary Research Center, Arizona State University**

**Kandyce Fernandez**

**Southwest Interdisciplinary Research Center, Arizona State University**



## Goals and Objectives

- The primary goal of the project is to create a central repository for Arizona's substance abuse and crime data in an effort to enhance data-for-decision-making, programmatic monitoring, and reporting consistency.
- Through a user-friendly website, individuals can access the type of data and the geographic level of interest with just a few clicks of a mouse.
  - Where available, data are displayed at multiple levels, across demographics, and over time.
  - Geographic levels include state, county, city, and defined community coalitions, depending on data availability and the appropriate level of reporting.
  - Output options include tables, graphs, and maps to cover a variety of reporting and visualization needs.



## Current Indicators and Their Utility

- **Consumption**
  - A system for assessing the current problem and/or tracking the prevalence of the problem over time.
- **Consequences**
  - A system for determining the correlative outcomes of the substance-use problem; can be used as one proxy for return on investment.
- **Context**
  - A system for identifying factors that influence (amplify or deter) decision-making about substance use.
- **Other**
  - A set of useful resources related to substance use



Office for  
**CHILDREN, YOUTH AND FAMILIES**  
*Building a Better Arizona*

# CDP Website Uses



## Grant Writing/Reports

- Good data brings **credibility** to your proposal – it illustrates need, identifies groups in particular need, demonstrates that you have done your homework, and that you have a source for tracking your progress over time if funded.
- Good **illustration** and **description** of your data can increase your odds of funding – particularly in these economic times.
  - » Tables and figures can be exported right out of the website and into your documents, and more enhanced representations are easily achievable.
  - » We're here to help – the data request process.



## Prevention and Intervention

- Data can be used to guide where you put your resource dollars to achieve the most ***bang for your buck***.
  - ***What:*** what is the problem - identify patterns and **avoid assumptions**
  - ***Who:*** what population is most affected by the problem – gender, age, race and ethnicity all matter - **one size does not fit all**
  - ***When:*** at what point in time did it become a problem, has it increased over time, where does it stand now; **one piece of the puzzle is not a complete picture**
  - ***Where:*** what geographic region is most affected – how does that region compare to the county, state and national problem; is it problematic in the community, in the home, in the schools; **avoid the ecological fallacy**
  - ***Why:*** what factors in the environment are increasing the problem (i.e., risk factors); what factors in the environment could help buffer the problem (i.e., protective factors); **change what can be changed**



## Data-For-Decision-Making

- Policy
  - Let the evidence speak for itself: Make it **clear, concise and concrete**.
  - Demonstrate the Return on Investment (**ROI**).
  - Rule of thumb: in **1 page**, sum up the problem, why it's a problem, what you want, how it will make a difference, and the **utility** (i.e., cost-benefit analyses) of the proposed change.
- Partners
  - **Buy-in is critical** – use the data to illustrate “**what’s in it for them**”.
    - Use the “stroke and kick” method by highlighting data that demonstrates what’s going well first, before you hit them with what needs to be changed.

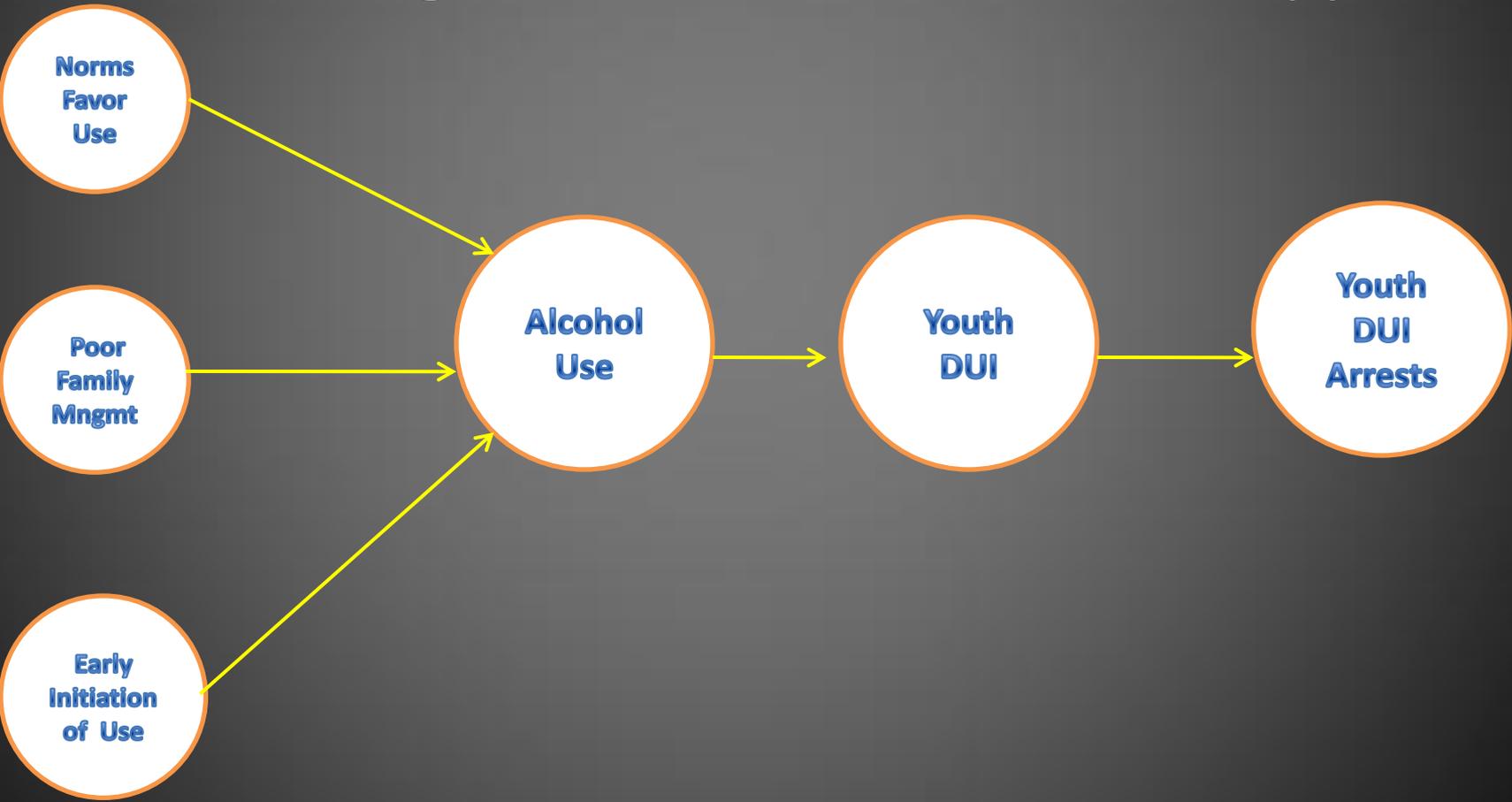


## Evaluation

- Outcome vs. Process Evaluation
  - The CDP houses data for outcome evaluation – specifically the prevalence of **problematic behaviors** (e.g., current use, substance-related ER visits, substance-related school removals), things that **influence** problematic behaviors, and youth **perceptions, attitudes and awareness**.
- Building Evaluation Models
  - Good models have a **pre and post test** – the gold standard for measuring the depth and breadth of efficacy!
    - » Raising awareness and changing attitudes is GOOD!
    - » Changing behavior is GREAT!
  - Expected **lag effects** and the importance of **time**
  - **Caveats of measuring** population-level change - measure as close to the population you are trying to affect as possible; the wrong data level can lead you to miss effective change or inaccurately assume positive results.

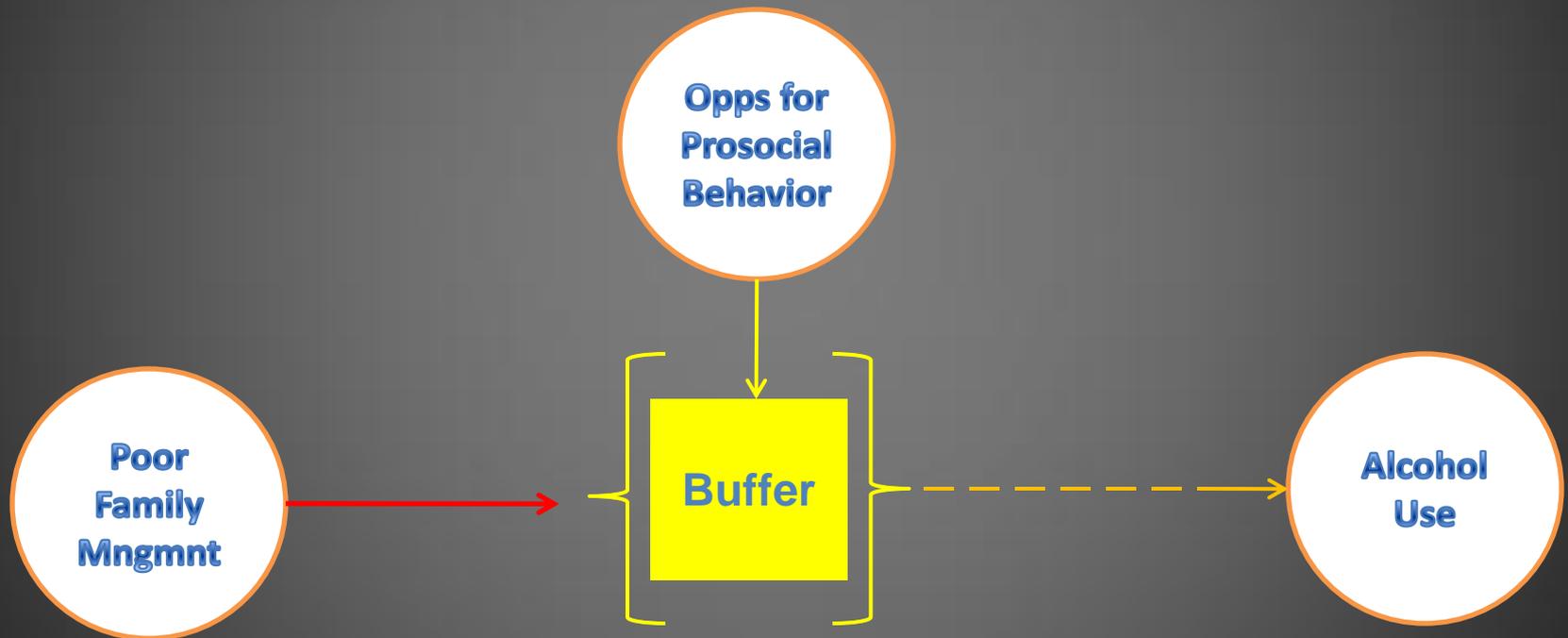


# Building Models – Risk Reduction Approach



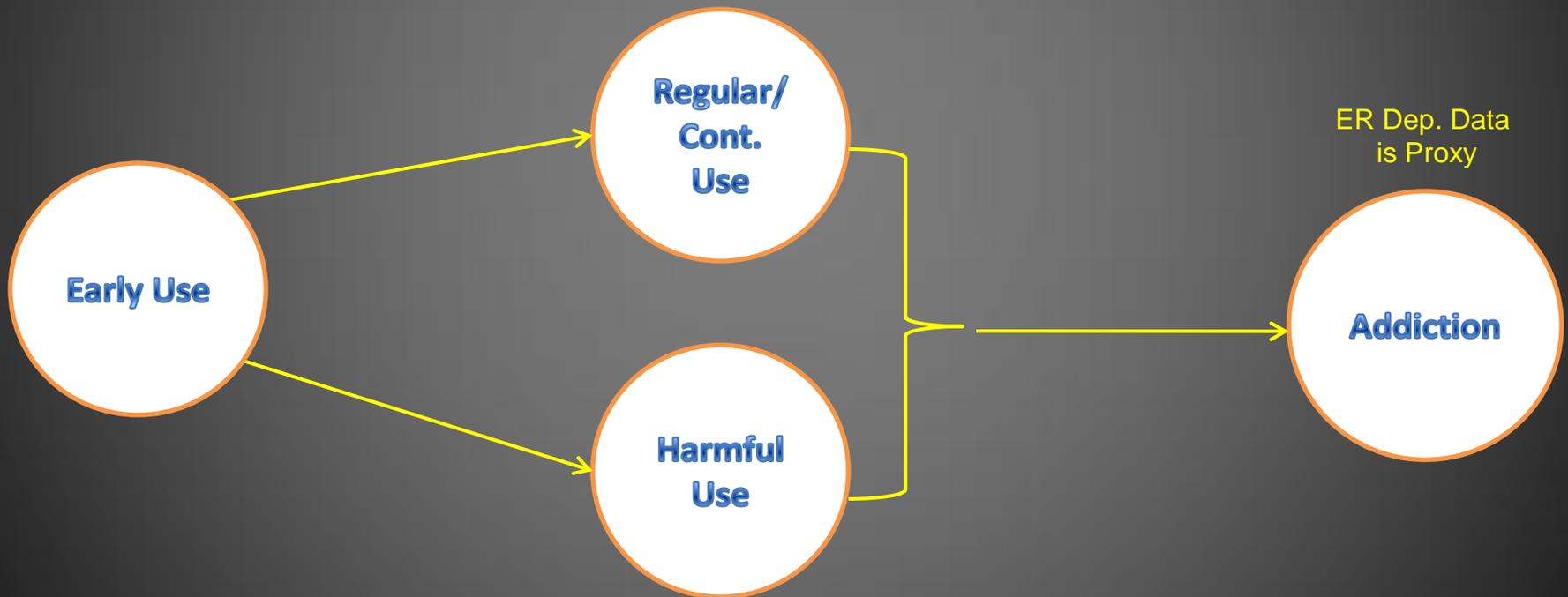


## Building Models – Buffer Approach





## Building Models - Assessment



Does Tx capacity, specifically residential, meet dependency needs?



## Two Basic Analytical Methods

- Tracking across time
  - $(\text{new-old})/\text{old} * 100 = \text{percent change between two time points}$
  - Time must make sense – measure appropriately
    - Basic pre-post
    - Each successive year to get % change at every time point or cumulative change
    - After expected lag effect (strategy has to have time to work before change can be expected)
- Between group comparisons
  - Higher/Lower = ratio of difference (e.g., 2.6x higher in one group)
  - Geographically: zip, coalition, city, county, state, national
  - Demographically: gender, age, grade, race, ethnicity



## Snapshot Approach

- The Drug Severity Index
  - A **pulse** for how severe the problem of youth substance use is in an area
  - Reflects the **#** of kids using, the **frequency** of use and the **harm** per substance
    - » Frequency: 1 = (1-2x, experimental); 2= (3-9x, weekend); 3= (10-19x, weekend + some weekday); 4=(20+, habitual)
  - The **higher** the score, the **more severe** the problem
    - » DSI <5 indicates that no more than 10% used low-to-moderately harmful substances experimentally (i.e., 1-2x in the past 30 days)
    - » DSI < 18 indicates that no more than 10% used each substance experimentally
    - » DSI > 40 indicates that at least ½ of kids used at least 1 moderate-greatly harmful substance several times (i.e., regular weekday use)



Office for  
**CHILDREN, YOUTH AND FAMILIES**  
*Building a Better Arizona*

<b>Youth Drug Severity Index</b>			
<b>Components</b>	<b>Coalition 2010</b>	<b>County 2010</b>	<b>State 2010</b>
<b>Index Factors</b>			
Percentage of Substance Users	57.84	54.77	42.30
Average Frequency of Use	2.89	2.43	1.82
Average Harm	9.73	8.36	6.46
<b>Severity Index of Individual Drugs (harm ranks in parentheses; higher = more harmful†)</b>			
Tobacco (7)	17.16	15.96	10.38
Alcohol (9)	19.46	19.54	14.96
Marijuana (5)	20.54	13.23	9.18
Hallucinogens (3)	0.68	0.42	0.65
Cocaine (11)	1.35	0.85	0.64
Inhalants (4)	4.46	1.58	1.49
Meth (8)	0.95	0.31	0.21
Heroin (12)	0.27	0.12	0.40
Ecstasy (1)	0.14	0.69	1.00
Steroids (2)	0.41	0.88	0.32
Rx Pain Relievers (6)	5.41	4.50	3.48
Rx Stimulants (8)	0.14	0.62	0.99
Rx Sedatives (10)	1.35	2.08	1.87
<b>Drug Severity Index Score</b>	<b>40.96</b>	<b>35.80</b>	<b>26.99</b>

†For details on harm ranks, see Nutt, D. et al. (2007). Development of a rational scale to assess the harm of drugs and potential misuse, *Lancet*, 369:1047-1053.



## Top-Down Approach

- Overall
  - Smallest geographic area across time
  - Smallest geographic area (e.g., coalition) compared to one or two other aggregate geographies (e.g., county, state)
- By Demographic Group
  - Within most current year, which group is highest
    - » Gender, age, grade, race, ethnicity
  - Across years, which group is changing most dramatically



Office for  
**CHILDREN, YOUTH AND FAMILIES**  
*Building a Better Arizona*

Percentage of Youth Reporting Current Substance Use							
In the past 30 days, on how many occasions (if any) have you: (One or more occasions)		Coalition 2004	Coalition 2006	Coalition 2008	Coalition 2010	County 2010	State 2010
<b>Alcohol</b>	had alcoholic beverages (beer, wine or hard liquor) to drink - more than just a few sips?	42.6	31.3	36.2	38.2	30.9	31.9
<b>Alcohol Heavy Use***</b>	how many times have you had 5 or more alcoholic drinks in a row in the past 2 weeks?	27.7	18.4	23.4	23.5	18.5	19.5
<b>Cigarettes</b>	smoked cigarettes?	19.8	13.8	15.4	14.3	13.2	14.7
<b>Chewing Tobacco</b>	used smokeless tobacco (chew, snuff, plug, dipping tobacco, chewing tobacco)?	4.3	2.2	3.8	4.5	4.2	5.1
<b>Marijuana</b>	used marijuana?	19.2	12.1	12.8	18.2	14.3	14.8
<b>Hallucinogens**</b>	used LSD or other hallucinogens?	2.8	1.5	1.6	1.9	1.7	1.6
<b>Cocaine</b>	used cocaine or crack?	4.7	2.0	1.9	1.3	1.3	1.4
<b>Inhalants</b>	sniffed glue, breathed the contents of an aerosol spray can, or inhaled other gases or sprays, in order to get high?	3.8	2.5	4.3	2.9	3.6	3.7
<b>Methamphetamines**</b>	used methamphetamines (meth, crystal, crank)?	n/a	1.2	0.7	0.1	0.4	0.4
<b>Heroin or Other Opiates</b>	used heroin or other opiates?	1.6	0.1	0.6	0.8	0.8	0.8
<b>Ecstasy**</b>	used Ecstasy ('X', 'E', or MDMA)?	1.0	0.5	1.5	2.1	2.6	2.5
<b>Steroids*</b>	used steroids or anabolic steroids (such as Anadrol, Oxandrin, Durabolin, Equipoise or Depotesterone)?	n/a	0.6	0.6	0.2	0.6	0.6
<b>Prescription Pain Relievers*</b>	used prescription pain relievers (such as Vicodin, OxyContin, Percocet or Codeine) without a doctor telling you to take them?	n/a	n/a	7.2	8.5	7.3	7.7
<b>Stimulants (2004 only)**</b>	used stimulants ("amphetamines", "meth", "crystal", "crank") without a doctor telling you to take them?	2.4	n/a	n/a	n/a	n/a	n/a
<b>Prescription Stimulants**</b>	used prescription stimulants (such as Ritalin, Adderall, or Dexedrine) without a doctor telling you to take them?	n/a	1.4	2.5	2.8	2.3	2.1
<b>Prescription Sedatives**</b>	used prescription sedatives (tranquilizers, such as Valium or Xanax, barbiturates, or sleeping pills)?	9.0	4.6	4.5	3.6	4.2	4.2
<b>Prescription Drugs**</b>	<i>combined results of prescription stimulant, sedative and pain reliever questions (see appendix for details)</i>	n/a	4.3	10.8	10.4	10.1	10.4
<b>Over-the-Counter Drugs*</b>	used over-the-counter drugs (such as cough syrup, cold medicine, or diet pills) for the purposes of getting high?	n/a	n/a	4.8	4.8	5.7	5.9



## An Overall Look

- **Current substance use in the coalition declined in 2006, followed by an increase in 2008 and 2010 for 11 of the 15 substances<sup>†</sup> (cocaine, meth and Rx sedative use consistently declined over time).**
- **Current rates in the coalition were an average 1.1x higher than Maricopa county and 1.1x higher than the state for the 17 substance categories (2010).**
- **Summary – substance use in the coalition is, on average, increasing rather than decreasing across time, and the coalition is higher compared to the county and state – particularly for heavy alcohol and marijuana use.**



## Drilling Down

- Males had a 1.2x higher rate of heavy alcohol use and a 1.3x higher rate of marijuana use.
- 12<sup>th</sup> graders had higher rates of heavy alcohol use than 8<sup>th</sup> and 10<sup>th</sup> graders – 1.6x and 3.8x, respectively; 12<sup>th</sup> graders had higher rate of marijuana use than 8<sup>th</sup> and 10<sup>th</sup> graders – 1.6x and 2.5x, respectively.
- White youth had higher rates of heavy alcohol use than Black and Multi-Racial youth – 3.6x and 3.1x, respectively; White youth had higher rates of marijuana use than Black and Multi-Racial youth – 5.6x and 1.7x, respectively.
- While rates of heavy alcohol use were comparable, Non-Hispanic youth in the coalition had a 1.1x higher rate of marijuana use than Hispanic/Latino youth.
- Summary: To make an impact on the heavy alcohol and marijuana use, tailored strategies towards older, White males in the coalition may bring the highest return on investment.



Office for  
CHILDREN, YOUTH AND FAMILIES  
*Building a Better Arizona*

# Website Demonstration

- <http://www.bach-harrison.com/arizonadataproject/>

The AZCDP website can also be found on the ACJC home page, under the SAC tab



## CDP Evolution

- New Variables
  - Rx Clearinghouse data – scripts and dosage
  - More Criminal Justice Data – adult and juvenile
  - More and enhanced AYS data – categorical data and indexes
- New Architecture
  - Interface will move to a decision-tree
    - » User groups will be better defined
      - Substance Use, Crime, AYS, Criminal Justice System, Demographics
    - » Drop downs will make finding variables of interest easier



## Group Breakouts

- Grant Writing/Reports
- Evaluation
- Data-For-Decision-Making
- Prevention and Intervention



Office for  
**CHILDREN, YOUTH AND FAMILIES**  
*Building a Better Arizona*

# Q&A and Feedback



## Take Home Message

- One size **does not** fit all.
- Local Information is the key to making the best-informed decisions and maximizing return on investment.
- Coupling various types of information across multiple levels provides the most comprehensive picture.



Office for  
CHILDREN, YOUTH AND FAMILIES  
*Building a Better Arizona*

# Thank You!

For additional information, contact:

Jeanne Blackburn

[jblackburn@az.gov](mailto:jblackburn@az.gov)

Shana Malone

[smalone@azcjc.gov](mailto:smalone@azcjc.gov)