WYSAC System Model of the Wyoming Criminal Justice System

WYSAC Technical Report No. CJR-802

June 2008
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By

Nanette Nelson, Assistant Research Scientist
Hristiyan Beshkov, IT Manager

Wyoming Survey & Analysis Center
University of Wyoming
1000 E. University Ave, Dept. 3925
Laramie, WY 82071
(307) 766-2189 • wysac@uwyo.edu
www.uwyo.edu/wysac

Under contract to
Bureau of Justice Statistics
810 Seventh Street, NW
Washington, DC 20531
USA


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1. Introduction
As the designated Statistical Analysis Center (SAC) on criminal justice for the state of Wyoming, the Wyoming Survey & Analysis Center (WYSAC) at the University of Wyoming applied for and received funding for fiscal year 2007 to complete “An Integrated Website for the Dissemination and Analysis of Criminal Justice Data.” This paper describes the work WYSAC completed to fulfill its obligation to the Bureau of Justice Statistics for the awarded funds. The project proposal entailed developing a quantitative model of the Wyoming Criminal Justice System (WCJS) to be housed on the existing WYSAC website (located at: http://www.uwyo.edu/wysac/). The system model of WCJS developed by WYSAC for this project provides policymakers with interactive access to key information about criminal justice in the state, constructed as a simulation model to enhance its usefulness.

The paper is organized as follows. Section 2 provides a brief discussion of models and modeling approaches. Section 3 covers the development and content of the WYSAC system model of WCJS and its incorporation on the web. Also included in this section is a discussion of how the model may be used for policy analysis and some ideas for future extensions to the model. Conclusions are presented in Section 4.

2. Simulation Models
A simulation model imitates the internal workings of the system. These models are necessarily simplifications of the system and are based on a number of assumptions. Simulation models can be used to understand how changes in the system impact system performance. The ability to execute “what if” scenarios makes simulation models particularly useful for policy analysis, planning, and cost-benefit calculations.

Simulation models can be constructed in a number of ways. Two well-known approaches are system-dynamics and agent-based. The major difference between the two approaches is the level at which each system is modeled: aggregate for system dynamics versus individual for agent-based. In system-dynamics, real world processes are represented as stocks, flows between these stocks, and information that determines the values of the flows (e.g., feedback mechanisms). System-dynamics takes an aggregate view of the system beginning with a set of equations that expresses the relationships among the measurable characteristics of interest. Agent-based modeling, on the other hand, focuses on individuals and their behavior, providing rules by which individuals (referred to as agents) interact with each other and their environment. Although agent-based models are grounded in the actions and interactions of individual agents, the results may be aggregated at any level to evaluate higher level processes within the system.

One further point of division that applies to both modeling approaches is how parameters are assigned to the variables of interest as the model executes. The assigned parameter can have a known or predetermined probability. For example, it might be specified that 25% of offenders arrested for a crime will be convicted. Or the assigned parameter can be based on a value randomly drawn from a distribution of values. For example, the likelihood of being convicted of a crime after...
arrest could be randomly determined based on a probability distribution of convictions. The first example is a deterministic model, and the second example is a probabilistic model.

3. A System Model of the Wyoming Criminal Justice System

The system model described in this paper attempts to simulate the movement of offenders through WCJS. As indicated in our project proposal, the basis of our system model is a flowchart of the criminal justice system developed by the Bureau of Justice Statistics (1997); this flowchart is presented below in Figure 1. To assist in the development of the Wyoming model, the descriptive model in Figure 1 was simplified to the following:

- a fraction of the general population are active offenders
- active offenders commit crimes
- crimes generate arrests
- arrests result in convictions
- convictions result in incarceration
- incarcerated individuals eventually return to the general population and may or may not return to the set of active offenders (i.e., recidivate)

The simplicity of the resulting model has several advantages. First, we captured the major components of WCJS (crimes, arrests, adjudication and sanctioning) along with the potential individual offender behavior of reoffending. Second, the structure of the basic model makes it more likely that the data needed to parameterize the model are available from the Wyoming’s Division of Criminal Investigation (WDCI). Finally, the simple structure makes the model easy to explain to policymakers and increases user-friendliness.

Figure 1. Flowchart of the Criminal Justice System
3.1. Purpose of the Model

The WCJS model is a quantitative representation of the state’s criminal justice system that can be modified to investigate policy and planning issues. Agent-based models in particular support “what-if” scenarios that estimate the relative impact of prospective changes to the system. Thus, the WCJS model provides a comparison over time between the current system and proposed changes. As such, the predictive capability of the WCJS model provides policymakers with additional information to make informed decisions on the best uses of limited resources.

3.2. Modeling Approach

In general, system-dynamics models are more suited to modeling processes, and agent-based models are more suited to modeling collections of entities with different characteristics. This particular distinction between the two modeling approaches is why we ultimately chose an agent-based approach to model WCJS rather than the system-dynamics approach that we had initially envisioned. Allowing for individual characteristics and subsequent interactions provides opportunity to apply adaptive techniques that result in behavior modification as the agents interact (Parnuk, et al., 1998). In the model of a criminal justice system, the adaptive techniques may represent the adoption of programs, policies or legislation with the intent of reducing recidivism.

Another advantage to agent-based modeling is that this approach makes the model easier to construct and use than a system-dynamics model. Certain behaviors are difficult to translate into stocks, flows and feedback mechanisms. Instead, users of the model can think directly in terms of familiar processes within the criminal justice system. As such, users of the model can rely on their knowledge of the criminal justice system and their intuition when executing the model.

3.3. Building the Model

An essential step in building a model is collecting the data that will be used to populate and calibrate the model. WYSAC reviewed existing state and national data sources to determine the extent of data available for this purpose. The result is a database library presented in Appendix A. The database library is a necessary step in identifying the data elements regarding criminal justice that are lacking in Wyoming. This information will in turn provide important input for enhancing the state’s criminal justice data infrastructure.

In the process of creating the database library and in consultation with the data subcommittee of the Governor's Substance Abuse and Violent Crime Advisory Board, it was determined that there were insufficient data to support the level of detail that had been originally envisioned for the model. Therefore, the current version of our WCJS system model is the simplest model capable of the desired analysis. In future refinements of this model (see Section 3.8), we intend to construct demographic distributions of offenders, referencing a linked database of criminal justice data.
3.4. How the Model Works

In the model the Wyoming general population is simulated as a certain number of individuals divided into two groups. One group is assigned a high probability of committing a crime (high-risk), and the other group is assigned a low probability of committing a crime (low-risk). The probabilities that are assigned can be changed from one run of the model to the next, using “slider” bars that are part of the graphical user interface. In effect, individuals are treated as either predisposed to commit a crime or to be law-abiding, but with individual differences in criminal activity within each group based on the assigned probabilities. The relative size of the two groups is set by the slider “percent-high-risk.”

Figure 2 presents a screen shot of the software interface and specifically the sliders that support the model. The total number of individuals can be set to whatever makes for a convenient graphical display. For example, setting the number of individuals at 10,000 means that each “individual” shown in the graphical display represents about 40 Wyoming adults. If each individual represented a single adult, the graphical display would be too cluttered for easy interpretation.

In the current version of the model, individuals from both groups either do or do not commit crime in a given year randomly, though at different rates. Crimes by those in either group lead to arrests at a rate set in the software interface by the slider “percent-arrests.” Arrests lead to convictions at a rate set by the slider “percent-convictions.” Whether an arrest or a conviction occurs is random, at the rates set by their respective sliders. Outcomes are assigned to offenders based on a value randomly drawn from a uniform distribution of values. The model’s default arrest and conviction rates are based on 2006 data as reported by WDCI (DCI, n.d.) and personal communication with state agency personnel (J. Glick, CJIS Supervisor, January 18, 2008).
Convicted criminals serve either a one- or five-year sentence depending on the crime. Each crime is categorized as a misdemeanor or a felony. An individual convicted of a misdemeanor receives a one-year sentence while a felony conviction receives a five-year sentence. Again, sentences are randomly assigned, but at rates that can be modified. The proportion of convictions that are for felonies is set by the slider “percent-felonies.” In 2006, 27 percent of Wyoming convictions were felonies, according to WDCI data (DCI, 2008 and J. Glick, personal communication, January 18, 2008). Therefore, approximately 27 percent of convicted criminals are assigned a five-year sentence in the model run depicted in Figure 2.

The model allows for individuals to enter the system, age, and die. The model assumes that all individuals are adults. Therefore, individuals are “born” into the system at age 18, and they can commit a crime and be arrested, convicted and incarcerated in the same year they are “born.” Individuals live for 50 years and then “die.” When an individual dies, s/he is replaced by one individual of the same risk group (high-risk or low-risk). This replacement allows new offenders to enter the system.
3.5. Policy Analysis with the Model

In order for users to perform comparative policy analysis with the WCJS model, they must be provided the means to implement proposed changes to the system. There are several points at which alterations can be made. WCJS users can manipulate the proportion of crimes that result in arrests by adjusting the slider “percent-arrests” in the software interface (Figure 2). Likewise, adjustments may be made to the proportion of arrests leading to convictions (“percent-convictions” slider) and the proportion of felonies (“percent felonies” slider). Each of these adjustments will have an effect on the prison population and the three-year recidivism rate.

An issue of particular importance to any criminal justice system is recidivism, the act of reoffending. We have incorporated this issue into the model through the slider “convert-high-risk.” This slider represents the programs to assist offenders who wish to improve their lives upon release from prison (e.g., adult reentry programs). The intent of such programs is to reduce the number of repeat offenders, thus reducing the detrimental impacts of crime. Among the impacts of interest, the number of individuals incarcerated is one indicator of the cost of dealing with crime and criminality. The model accounts for such programs by allowing high-risk individuals to be converted to low-risk individuals at a user-specified rate.

3.6. Modeling an Adult Reentry Program

Wyoming’s adult reentry programs are designed to reduce adult offender recidivism by providing substance abuse and mental health treatment, as well as educational, employment, and housing needs (WYSAC, 2006). Studies have shown significant reductions in adult offender recidivism rates for those who enrolled in a program (WYSAC, 2006). Different adult reentry programs have differing rates of success. To illustrate with our model the effect that an adult reentry program could have on the three-year recidivism rate and the prison population, we will increase the slider “convert-high-risk” from 0% to 15%. This adjustment assumes that currently (baseline condition) there are no effective adult reentry programs (zero percent of high-risk individuals are converted to low-risk individuals), and that a new program being considered would have a modest 15% success rate in that conversion. Figure 3 shows the simulations results for the baseline condition. The effect of the adult reentry program (and the corresponding conversion of 15% of high-risk individuals to low-risk individuals) is shown in Figure 4. Notice that adult reentry programs result in a slightly lower three-year recidivism rate, and a substantially lower prison population.

3.7. Limitations of the Current Model

Criminal justice data for the state of Wyoming is in a relatively early stage of development. For example, Wyoming does not participate in the National Incident-Based Reporting System. The resulting data limitations necessitated several adjustments in the original plan for this project. As previously mentioned the system-dynamics model was replaced by an agent-based model, and the level of detail originally sought for the model was simplified to the major components of the WCJS. These adjustments allowed model development to proceed without the creation of a relational database that could be queried for downloadable datasets and without some other features (e.g., interactive mapping) that would have enhanced data presentation. However, as illustrated in Figures 2 through 4, the model as implemented for the public website does include a number of interactive, user-controlled settings and informative graphical displays.
Figure 3. Comparative Analysis - No Adult Reentry Programs (Baseline)
Figure 4. Comparative Analysis - Adult Reentry Programs with 15% Conversion (Scenario)
We note, too, that in completing the required deliverables, WYSAC fell somewhat behind the schedule originally proposed. The proposal had envisioned starting the work on July 1, 2007, but funding was not made available until the end of August. The schedule was revised accordingly, and the work proceeded according to the new schedule through December. However, the lead principal investigator left WYSAC’s employ in March. The new personnel assigned to the project needed time to get familiar with the work. As a result, testing and validation of the website took until May 31, and completion of this final report describing the project and the model took until June 30 (both milestones being achieved approximately two months later than the revised target dates).

3.8. Model Extensions

This model can be extended in two substantive areas. The first is in how parameters are assigned to individuals at the different nodes in the model (e.g., commit a crime, arrest, conviction, and sentencing). Currently, the model assigns parameters based on predetermined probabilities. For example, 65% of offenders arrested for a crime will be convicted and sent to jail. The model would better reflect current offender behavior if the assigned parameters were drawn from a distribution of values based on observed offender data (e.g., gender, age, type of crime committed, etc.). The database library produced for this project (Appendix A) is a key step in assembling the data that will be needed for building this refinement into the model.

The second area is related to the complexity of the model. We have chosen to simplify the WCJS to facilitate model development. Future iterations of the model could include more complexity. For instance, additional nodes such as probation and parole could be included, as could more detail in the existing nodes.

3.9. Technologies Used to Build the Model

The WCJS model was constructed using NetLogo, a software development environment for agent-based simulation and modeling systems (http://ccl.northwestern.edu/netlogo/). NetLogo provides a powerful programming language and the ability to construct a graphical user interface for input and output data (Railsback, et. al., n.d.). A major NetLogo feature is the capability to export the model into a Java applet for incorporation into a web page. The software has been used to develop applications in disciplines varying from biology and physics to the social sciences.

The project team created a publicly available web application that includes detailed information about the model and instructions on how to use it. The addition of this model to the website substantially enhances its usefulness and demonstrates WYSAC’s newly acquired knowledge and experience in building interactive agent-based system models. The web application is available on the current WYSAC website (http://wysac.uwyo.edu/cjsmodel), and will be a featured part of a thoroughly revised WYSAC website that is scheduled for release this fall. The criminal justice model will be publicized via online articles, banners, and web links on WYSAC’s website and other partner websites, when appropriate. WYSAC will monitor the number of visitors to the website using the open-source package Webalizer (http://www.mrunix.net/webalizer/).

Finally, WYSAC is committed to maintaining, improving, and enhancing the model for public use. To facilitate these efforts, WYSAC has developed a feedback module which allows website visitors to submit suggestions and comments to the development team. The module is accessible through the Feedback link.
4. Conclusions
The model presented in this paper is a quantitative representation of WCJS. The approach used in this effort simplifies a complex criminal justice system so that it is easily understood by policymakers and increases the likelihood of use. The model’s simplicity also ensures that it is easily maintained with the most current Wyoming criminal justice data. Policymakers can use the model to analyze the impact of proposed changes to the current system before they are adopted. In this way, the model provides useful output to inform the decision-making process regarding WCJS.

5. References


Appendices

Appendix A. Database Library

**Database: Addiction Severity Index**

**Acronym:** ASI

**Owner/Creator:** Department of Corrections / Treatment Research Institute

**Description:** A semi-structured interview given to inmates. Assesses 7 areas: medical status, employment and support, drug/alcohol use, legal status, family history, social relationships, and psychiatric status. Clients are asked to respond to specific questions about the problems they have experienced, both within the past 30 days and over their lifetimes. Produces severity ratings in each area, representing offender's need for treatment in each area. Also provides composite score of problem severity across last 30 days.

**Data Sources:** Semi-structured interview

**Database: American Society of Addiction Medicine Database**

**Acronym:** ASAM Database

**Owner/Creator:** Department of Corrections / Created by the ASAM

**Description:** The ASAM PPC-2R is used by the Dept. of Corrections ASI assessors to determine a recommended level of treatment for substance abuse (after the assessor has administered the ASI). The results of the PPC-2R (a questionnaire that results in a recommended level of treatment) is provided to judges in each felony offender's pre-sentence investigation report. This assists the judges in determining whether the given offender should receive alternative sentencing and/or treatment under a Wyoming statute called the Addicted Offender Accountability Act (AOAA).

**Data Sources:** Questionnaire

**Database: Chronic Care Database**

**Access:** Private

**Description:** Maintained by the contractors who provide physical and mental health care to inmates throughout the state.
**Database:** Community Health Status Indicators

**Acronym:** CHSI 2000

**Owner/Creator:** Association of State and Territorial Health Officials, the National Association of County and City Health Officials and Public Health Foundation (see http://www.phf.org/research.htm#Community)

**Access:** Public with purchase

**Description:** The Community Health Status Indicators (CHSI 2000) project produced county-specific reports of community health status for local jurisdictions across the United States. This collaborative activity of the Association of State and Territorial Health Officials, the National Association of County and City Health Officials and PHF was funded by the Health Resources and Services Administration, HHS. The goal of the CHSI project is to provide important health and health-related data, presented in a way that makes them useful to communities. It builds upon the excellent work in developing community health profiles by many state and local health departments, federal agencies, and national organizations, by adding data elements and comparisons that are not readily available to the majority of local communities.

**Case Identifiers:** County, state, FIPS code.

**Data Sources:** American Medical Association, American Dental Association, Bureau of Primary Health Care, Current Population Survey (CPS), Health Care Financing Administration, U.S. Bureau of the Census, Behavioral Risk Factor Surveillance System (BRFSS), National Center for Health Statistics, EPA

**Data Dictionary:** Medicaid beneficiaries, primary care physicians, dentists, community health centers, health professional shortage area, sedentary, few fruits/vegetables, obesity, high blood pressure, smoker, diabetes, uninsured individuals, Medicare beneficiaries, population size, population density, poverty level, population by age, population by race/ethnicity, mammogram, sigmoidoscopy, pneumonia, flu, infectious disease cases, pap smear, peer counties, toxic chemicals, air quality standards, unemployed, severe work disability, major depression, recent drug use, average life expectancy, all causes of death, self-rated health status, average number of unhealthy days in past month, deaths due to complications of pregnancy/birth, no high school diploma, breast cancer, colon cancer, coronary heart disease, homicide, lung cancer, motor vehicle injuries, stroke, suicide, unintentional injury, birth defects, cancer, heart disease, HIV/AIDS, Hispanic ethnicity, premature births, teen mothers, older mothers, unmarried mothers, no care first trimester, and infant mortality.
**Database:** Correctional Offender Management Profiles for Alternative Sanctions Database

**Acronym:** COMPAS Database

**Owner/Creator:** Department of Corrections / Northpointe Institute for Public Management, Inc. (created COMPAS)

**Description:** A risk-assessment survey given to inmates. Gathers information regarding static and dynamic factors about resident. Computer program then generates a risk profile using deciles to assess overall risk potential and offender characteristics. Computer program produces: (1) Overall risk potential for: violence, failure to appear, community non-compliance, and recidivism and (2) Offender's: history of violence, level of current violence, and educational and occupational needs.

**Data Sources:** Computer administered and scored survey.

**Database:** Crime in the US

**Acronym:** CIUS

**Owner/Creator:** FBI: http://www.fbi.gov/ucr/ucr.htm

**Access:** Public

**Format:** Web-based search

**Description:** Provides information on crimes by offense, by region, by state, and by local agency.

**Case Identifiers:** State, county agency, and city agency

**Data Sources:** State and local police agencies voluntarily submit data to the FBI.

**Data Dictionary:** State- county-, and city-level data for the total number of violent crimes (counts and rates), which are also broken down into: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. State-, county-, and city-level data for the total number of property crimes (counts and rates), which are also broken down into: burglary, larceny-theft, and motor vehicle theft. State- and county-level total arrests by age (under 18 and all other ages) for: Total all classes, violent crime, property crime, murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, arson, other assaults, forgery and counterfeiting, fraud, embezzlement, stolen property (buying, receiving,
possessing), vandalism, weapons (carrying, possessing, etc.), prostitution and commercialized vice, sex offenses (except forcible rape and prostitution), drug abuse violations, gambling, offenses against the family and children, driving under the influence, liquor laws, drunkenness, disorderly conduct, vagrancy, all other offenses (except traffic), suspicion, curfew and loitering law violations, runaways, number of agencies 2006 estimated population.

**Relations to Other Data:** WyCJIS, Wyoming CCH System, NLET, NCIC 2000, III, UCR Crime Trends, UCR Homicide Trends

**Database:** Interstate Identification Index

**Acronym:** III

**Owner/Creator:** FBI

**Access:** Private

**Description:** The III index points to the criminal history record residing either in the FBI or the particular state(s) holding information. The III utilizes the telecommunications system of the FBI, the individual states and NLETS to respond to requests for criminal history information. This decentralized system promotes the use of state records, which are more complete.

**Data Sources:** State and federal criminal justice agencies.

**Relations to Other Data:** WyCJIS, Wyoming CCH System, NLET, NCIC 2000, UCR Crime Trends, UCR Homicide Trends, CIUS, UCR Crime Trends, UCR Homicide Trends

**Database:** National Crime Information Center Database

**Acronym:** NCIC 2000

**Owner/Creator:** FBI

**Access:** Private

Data Sources: State and federal criminal justice agencies.

Data Dictionary: Wanted person reports (warrants), foreign fugitive reports, missing persons reports, protective order data, persons of possible danger to secret services protectees, sex offenders registration data, persons on supervised release, and violent gang and terrorist organizations and members.


Database: National Law Enforcement Telecommunications System

Acronym: NLETS

Owner/Creator: The International Justice and Public Safety Network

Access: Private

Description: An international, computer-based message switching system that links together state, local and federal law enforcement and justice agencies for the purpose of information exchange. NLETS supports data communications links to state networks using a commercial frame relay service. All agencies within each state are serviced through this state interface. Federal and international systems operate in much the same manner. The primary NLETS operational site is located within the Arizona Department of Public Safety's facility, with a disaster recovery site located with the Idaho State Police for full continuity of operations in less than thirty minutes.

Data Dictionary: Vehicle registration, driver’s license, criminal history records, parole and probation, corrections information, and sex offender registrations.

Relations to Other Data: WyCJIS, Wyoming CCH System, NCIC 2000, III, UCR Crime Trends, UCR Homicide Trends, CIUS

Database: Texas Christian University Drug Screen Database

Acronym: TCU Drug Screen Database

Owner/Creator: Department of Corrections / Institute of Behavioral Research, Texas Christian University (created instrument)

Description: A self-administered questionnaire that identifies individuals with a history
of heavy drug use or dependency (based on the DSM and the NIMH Diagnostic Interview Schedule) and who therefore should be eligible for treatment options. It is particularly useful (and widely used) in criminal justice settings, especially for offenders eligible for treatment as an alternative to regular incarceration. Final score indicates severity of drug use and if respondent feels primarily responsible for his/her drug problems.

**Data Dictionary:** Severity of drug use (score of 0-9) and if respondent feels primarily responsible for his/her drug problems.

**Relations to Other Data:** WyCJIS, Wyoming CCH System, NCIC 2000, III, UCR Crime Trends, UCR Homicide Trends, CIUS

**Database:** Uniform Crime Report – Crime Trends

**Acronym:** UCR – Crime Trends

**Owner/Creator:** US Department of Justice - Bureau of Justice Statistics:
http://bjsdata.ojp.usdoj.gov/dataonline/

**Access:** Public

**Format:** Web-based search

**Description:** Provides information on the number and rates of violent and property crimes reported by state or by police departments in larger cities. Allows for single agency trends (can choose the variables of interest and years of interest), trends in one variable (can choose the police departments represented and years of interest), and one year of data (can choose police departments and variables of interest).

**Case Identifiers:** Wyoming totals (since 1960), or by police departments (since 1985): Casper, Cheyenne, Evanston, Gillette, Green River, Laramie, Riverton, Rock Springs, and Sheridan.

**Data Sources:** State and local police agencies voluntarily submit data to the FBI based on reports by citizens.

**Data Dictionary:** Months reporting and population coverage. Total number of violent crimes (counts and rates), which are also broken down into: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. Total number of property crimes (counts and rates), which are also broken down into: burglary, larceny-theft, and motor vehicle theft.

**Relations to Other Data:** WyCJIS, Wyoming CCH System, NLETS, NCIC 2000, III,
Database: Uniform Crime Report – Homicide Trends and Characteristics

**Acronym:** UCR – Homicide Trends

**Owner/Creator:** US Department of Justice - Bureau of Justice Statistics:
http://bjsdata.ojp.usdoj.gov/dataonline/

**Access:** Public

**Format:** Web-based search

**Description:** Provides state-level information on the number of homicide victims. Allows for trends in one variable (can choose the years of interest), and one year of data (can choose the variables of interest).

**Case Identifiers:** Wyoming totals (since 1960), or by police departments (since 1985): Casper, Cheyenne, Evanston, Gillette, Green River, Laramie, Riverton, Rock Springs, and Sheridan.

**Data Sources:** State and local police agencies voluntarily submit data to the FBI.

**Data Dictionary:** Total number of homicide victims. Percentage of victims by: age (<14, 14-17, 18-24, 25-34, 35-49, 50-64, 65+); race (white, black, other); gender; race x gender (white female, white male, black female, black male, other female, other male); and weapon type (gun, knife, other).

**Relations to Other Data:** WyCJIS, Wyoming CCH System, NLETS, NCIC 2000, III, UCR Crime Trends, CIUS

Database: Uniform Crime Report – Hate Crime Data

**Acronym:** UCR – Hate Crime Data

**Owner/Creator:** FBI – Accessed through National Archive of Criminal Justice Data:
http://www.icpsr.umich.edu/NACJD

**Access:** Membership required

**Format:** SPSS or SAS

**Description:** A part of the Uniform Crime Reporting (UCR) Program, this data is "about
crimes that manifest evidence of prejudice based on race, religion, sexual orientation, or ethnicity, including where appropriate the crimes of murder and non-negligent manslaughter, forcible rape, aggravated assault, simple assault, intimidation, arson, and destruction, damage or vandalism of property." As with the other UCR data, law enforcement agencies contribute reports either directly or through their state reporting programs. Information contained in the data include: number of victims and offenders involved in each hate crime incident, type of victims, bias motivation, offense type, and location type. Available for 1992 - 2003.

Case Identifiers:  State, city, FIPS county code.

Data Sources:  Law enforcement agencies.

Data Dictionary:  Numeric state code, originating agency identifier (ORI), city name, state abbreviation, population group covered by ORI, country division, country region, agency type, core city, judicial district, current population, UCR county code, MSA code, last population, FIPS county code, hate crime record type, incident number, incident date, data source, quarter of the year, total victims, total offenders, offenders' race, offense code(s), location code, bias motivation, types of victims.

Relations to Other Data:  CIUS

Database:  US Drug Enforcement Administration SMARATS Defendant Statistical System

Acronym:  DEA SMARTS DSS

Owner/Creator:  See DEA website for listing:

Access:  Private

Database:  Wyoming Client Information System

Acronym:  WCIS

Owner/Creator:  Wyoming Mental Health and Substance Abuse Services Division

Access:  Private

Format:  SQL
Description: A web-based data collection and reporting system which allows Wyoming's Mental Health and Substance Abuse providers to input client demographics, client services, and administrative data.

Database: Wyoming Computerized Criminal History System

Acronym: Wyoming CCH System

Owner/Creator: Department of Criminal Investigation

Access: Private or public with finger prints and permission

Description: Information, records, and data compiled by criminal justice agencies on those who have committed felonies, high misdemeanors, and other misdemeanors as determined by the criminal justice agencies pursuant to W.S. 9-1-623(a) but does not apply to violations of municipal ordinances. Records include identifiable descriptions of offender, and summary of arrests, detentions, indictments, pre-trial proceedings, nature and disposition of criminal charges, sentencing, rehabilitation, incarceration, and correctional supervision and release.

Data Sources: Criminal justice agencies, including: probation/parole, corrections departments, courts, prosecutors, police departments, and sheriff’s departments.

Relations to Other Data: WyCJIS, NLETS, NCIC 2000, III, UCR Crime Trends, UCR Homicide Trends, CIUS

Database: Wyoming Criminal Justice Information System

Acronym: WyCJIS

Owner/Creator: Department of Criminal Investigation and Analysts International

Format: Microsoft’s .NET platform, BizTalk 2004 and SQL 2000

Data Sources: State Courts, Warrants, Protection Orders, Department of Corrections, Sex Offender Registry, Computerized Criminal History, Concealed Firearm Permit, Vehicle Title, Vehicle Registration, Drivers License and Drivers License Photos

Relations to Other Data: Wyoming CCH System, NLETS, NCIC 2000, III, UCR Crime Trends, UCR Homicide Trends, CIUS
Database: Wyoming Sexual Offender Registration System

Acronym: WYSORS

Owner/Creator: Division of Criminal Investigation

Access: Public

Format: Internet search; hard-copy available

Description: Information on all convicted sex-offenders currently registered.

Case Identifiers: Name, address, city, zip code, DOB.

Data Sources: Registration form completed at law enforcement office where offender resides.

Data Dictionary: Name, aliases, DOB, place of birth, sex, race, height, weight, eye color, hair color, home address, photograph, date registered, duty to register, registration status, next registration date, and vehicle description (license plate, year, make, model, number of doors, and color). Also includes information on the offense(s) committed requiring registration (state statute, section title, conviction date and place of conviction).

Relations to Other Data: WyCJIS, NLETS, NCIC 2000, III

Database: WyoSafe Database

Owner/Creator: Built by WYSAC for the Department of Victim Services

Access: Private

Description: Incident-based data generated by county-level victim service offices. Only captures information regarding incidences in which the victim utilizes DVS services.

Case Identifiers: In full database: name, address, DOB, phone number, ethnicity, and gender of victims and offenders; name, DOB, and gender for children. When identifying information removed, in past still had ability to identify repeat victims.

Data Sources: Report filled out by county-level victim service offices.

Data Dictionary: For both victim and offender: name, DOB, ethnicity, gender, marital
status, address, phone number education, employment status, occupation, employer, and special needs. For victim only: alternate last name, PVN, permission to call, and other income sources. For offender only: legal status now and legal history. For child: name, DOB, gender, type of violence exposed to, relationship to victim and offender, and services provided. Incident data: initial contact date, time, and method; primary victimization and details; narrative of incident; alcohol and drug status at time of incident for both victim and offender; weapons used by offender; injuries sustained by victim; police contact date and time, action taken; victim's relationship to offender; past abuse type and frequency. Services data: basic services provided and reason for not serving (if needed); protection orders; stalking orders; shelter provided and exit/turnaway status (if needed); referrals and reasons for not serving (if needed).

**Database:** Substance Estimates from the National Surveys on Drug Use and Health

**Acronym:** Substance Estimates from the NSDUH

**Owner/Creator:** Substance Abuse and Mental Health Service Administration (SAMHSA) Office of Applied Studies

**Access:** Public

**Format:** Web-based search

**Description:** These subState areas may be regions, counties, or other geographic areas that each State has identified as their State treatment planning areas, that is, areas for the purpose of allocating the substance abuse treatment block grant funds from the Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA's OAS presents estimates of substance use for each of these State's treatment planning areas.

**Case Identifiers:** Judicial districts, states.

**Data Dictionary:** Any illicit drug use in past month. Marijuana: use in past year and past month, perceptions of great risk of smoking marijuana once a month, average annual rates of first use. Any illicit drug other than marijuana use in past month. Cocaine use in past year. Nonmedical use of pain relievers in past year. Alcohol: use in past month, binge in past month, perceptions of great risk of heavy drinking once or twice a week; underage use and binge use in past month. Tobacco: use in past month, cigarette use in past month, perceptions of great risk of smoking one or more packs per day. Dependence or abuse of: alcohol in past year, illicit drug in past year. People needing but not receiving treatment for illicit drug problems or alcohol problems in past year. Serious psychological distress in past year.