

# **Riddles Wrapped in Mysteries Inside Enigmas: Issues with Getting and Using Administrative Data for Impact Evaluations<sup>1</sup>**

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## **Abstract**

Evaluators turn to administrative data as an objective rather than perceptual source of information that can be used to help triangulate evaluation findings along with non-administrative sources. Administrative data are generally designed for purposes other than evaluation, however, may only partially meet evaluators' needs, and bring their own challenges. The Office for Juvenile Justice and Delinquency Prevention funded nine programs in eight states to reduce drinking among underage Airmen at Air Force bases and their surrounding communities through its Enforcing Underage Drinking Laws (EUDL) discretionary grant program. Using an environmental approach, the program interventions included enforcement aimed at reducing the social availability of alcohol; compliance checks of local liquor establishments; impaired driving enforcement; local policy development; community-based awareness/media campaigns; and offering alternative activities that did not include drinking alcohol. In this paper, we report on our experiences using five administrative data sources to assess the impact of these programs. Grantees provided monthly data retrospectively for two years prior to program implementation and prospectively for up to two years after the beginning of program implementation. Some of the micro-level issues that we faced included data that were incomplete for some months, data stored in forms that prohibited the kinds of aggregation that we needed for the purposes of the evaluation, and transferring and summarizing data from repositories that were designed for other purposes. The macro-level issues included lack of cooperation from data source gate-keepers, lack of access due to concerns with violating HIPAA rules, and the length of time required to collect the retrospective data. Additionally, reconciling data from different sources was occasionally problematic. Based on these experiences, we offer a number of lessons learned and solutions for dealing with these issues for future evaluations that use administrative data.

## **Introduction**

Administrative data are appealing to evaluators as they are often readily available and avoid some of the pitfalls of self-reported behavior – they can serve as more “objective” measures of certain outcomes. In designing the evaluation we report on here, we identified the key data metrics that would let us assess the impact of programmatic efforts to reduce underage drinking among Airmen. We wanted “objective behavioral measures” on underage drinking and related consequences that were the most robust and the least susceptible to bias, as contrasted with “subjective” self-reported alcohol-related behaviors and negative consequences. The most readily available and, we thought, the least burdensome measures would come from administrative data from civilian and military sources.

The reality differed markedly from our initial assumptions in that administrative data was not as readily available as we expected. Some of the micro-level issues that we faced included data that were incomplete for some months, data stored in paper forms or electronic formats that prohibited the kinds of aggregation that we needed for the purposes of the evaluation, and transferring and summarizing data from repositories that were designed for other purposes. The macro-level issues included lack of cooperation from data source gate-keepers, lack of access due to gate-keepers' concerns with violating HIPAA rules or Air Force regulations, and the length of time required to collect the retrospective data. Additionally, reconciling data from different sources was occasionally problematic. In spite of all

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of these issues, we did manage to use much of the available data to assess the overall impact of the program. We learned several lessons along the way that other evaluators may find useful when they attempt to use administrative data in impact evaluations.

In the remainder of this paper, we describe the EUDL program, the Air Force bases and their respective communities, examine the issues with regard to data acquisition and usefulness for analysis, and offer several lessons learned.

### **Genesis of the EUDL Demonstration Grants for Communities with Air Force Bases**

Since the fall of 2006, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the federal Department of Justice has awarded discretionary grants to nine communities in eight states as part of OJJDP's Enforcing Underage Drinking Laws (EUDL) initiative.<sup>2</sup> These communities are near United States Air Force (USAF) bases and the grants fund Air Force / Community partnerships to reduce drinking by underage Airmen. In 2006, five communities in four states received funding. OJJDP funded two additional states each in the fall of 2009 and 2012. ICF International (ICF) has served as the external evaluator of the EUDL programs implemented in these nine communities.

Central to each of the funded programs was the establishment and operation of a community coalition made up of organizations and personnel from the Air Force community and the civilian community. From the civilian sector, agencies in the coalition often included elected officials, local police departments, human service agencies such as health and wellness clinics, alcohol beverage control departments, and voluntary organizations such as drunk-driving prevention groups. From the Air Force base (AFB), organizations in the coalition often included the base Wing Commander, the Alcohol and Drug Abuse Prevention and Treatment (ADAPT) program, Security Forces, housing, Health Awareness Centers (HAWC), and Morale, Welfare and Recreation (MWR) personnel. These community coalitions engaged in such prevention activities as community education, training and technical assistance, and alternative activities for young military personnel. Of the nine AFB/community sites, six have finished their interventions, one is in its final year, and two have recently had their work plans approved and have begun their programmatic activities.

The focus of this paper is on the first seven grantees and the issues surrounding the acquisition of administrative data for the evaluation. In the sections below, we first discuss the grant program, then present the overall evaluation design and discuss the data requirements and the sources of administrative data. Taking a case study approach, we then examine the extent to which we were able to obtain administrative data or not and some of the issues that we discovered along the way, and we end with lessons learned and recommendations for other evaluators who may find themselves in similar circumstances. The results of the evaluation of the first five sites have been reported elsewhere and will not be discussed here (see, for example, Spera, et al., 2012, and other references in the bibliography)

Table 1 shows the seven communities awarded EUDL grants, the AFBs served, and the history of the AFBs in each community. The AFBs in this demonstration grant program have been situated in their respective communities for a very long time (Mueller, 1989).

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<sup>2</sup> EUDL has been in existence since 1998. The program makes funds available to states via block grants and uses discretionary grants to fund specific types of local programs. For example, discretionary grants have funded randomized trials and demonstration programs in rural areas. The Air Force and community coalition program is another example. For more information on the EUDL initiative, please see: <http://www.ojjdp.gov/programs/ProgSummary.asp?pi=17>, accessed on January 31, 2014.

<b>Table 1: Seven Demonstration Sits with a Brief History</b>		
<b>Community</b>	<b>AFB</b>	<b>AFB History</b>
Phoenix, Arizona	Luke AFB	Established in 1941.
Tucson, Arizona	Davis-Monthan AFB	Was a landing field in 1925, the Tucson Municipal Airport in 1927, and an AFB in 1941.
Honolulu, Hawaii	Hickam AFB	Established in 1935 and fully occupied by 1937.
Yuba County, California	Beale AFB	Began as an Army post in 1942, and was converted to an AFB in 1951.
Great Falls, Montana	Malmstrom AFB	Began as the Great Falls Army Base in 1942, becoming part of the Air Force in 1948. <sup>3</sup>
Cheyenne, Wyoming	F.E. Warren AFB	First established in 1867 as Fort Russell in the same year as the city of Cheyenne (then called "Crow Creek Crossing") in Wyoming. A presidential proclamation renamed it "Fort Francis E. Warren". It became Francis E. Warren AFB in 1947 after World War II.
Warrensburg and Knob Noster, MO	Whiteman AFB	Began in 1942 as Sedalia Army Air Field. As part of the demobilization efforts after World War II, Sedalia was closed until 1951 when it was selected to be a new bombardment wing of the Strategic Air Command. It was renamed Whiteman AFB in 1955.

### **Alcohol Programs in the Air Force**

Air Force Instruction (AFI) 44-121 provides guidance for the Alcohol and Drug Abuse Prevention and Treatment (ADAPT) program begun in the 1990's and still operational today. The objective of the program is to identify Air Force members who exhibit various behaviors associated with drug or alcohol abuse or dependence and intervene with treatment. Additionally, the ADAPT program at each AFB conducts various activities targeting the prevention of such abuse.

In 2004, the wing commander at F. E. Warren AFB in Wyoming, Col. Evan Hoapili, along with Wyoming's First Lady and a non-profit organization called "Facing Alcohol Concerns Through Education" developed the "0-0-1-3" policy and program to dramatically decrease the extent of alcohol abuse among all Airmen. The name signified: (0) Zero instances of underage drinking; (0) zero DUI/DWI infractions; (1) one drink per hour at social occasions; and (3) a maximum of three drinks per night (F.E. Warren AFB, 2005). Alongside the enforcement of the policy, F.E. Warren AFB also instituted alcohol-free activities to reinforce the idea that having a good time and enjoying oneself is possible without any alcohol. The program was very successful and led to its evolution and expansion in the form of the "Culture of Responsible Choices" (CoRC) initiative Air Force-wide in 2006.

Thus, the EUDL demonstration grants are efforts that occur in addition to substance abuse programs currently maintained by the U.S. Air Force, such as ADAPT, 0-0-1-3, and the Culture of Responsible Choices (CoRC).

### **Environmental Strategies to Reduce Underage Drinking**

The EUDL initiative uses an environmental-strategies approach in the design of interventions at the community level. Environmental strategies are those strategies aimed at the 'environment' or the macro level in which people live as contrasted with strategies aimed at the individual or micro level. Empirical research on the application of environmental strategies to reduce alcohol consumption can be traced back to the early 1990's when communities began to take a macro or systems approach to preventing underage drinking. These macro-level strategies included formulating alcohol policies, restricting access, targeting establishments that serve alcohol to be more cognizant of and compliant with liquor laws, and addressing cultures or social networks that perpetuate dangerous attitudes or behaviors with respect to drinking.

<sup>3</sup> The Air Force in its current form was brought into being in 1947 with the National Security Act of that year. Prior to that, it was a component of the United States Army starting in 1907. Undergoing various name changes over the years, it was called the "United States Army Air Force", interestingly enough, from 1941 to 1947 when it became a separate branch of the Department of Defense, which the National Security Act also brought into existence. So it is not unusual for these AFBs to have started out as Army installations. See [http://en.wikipedia.org/wiki/History\\_of\\_the\\_United\\_States\\_Air\\_Force](http://en.wikipedia.org/wiki/History_of_the_United_States_Air_Force), accessed on January 31, 2014.

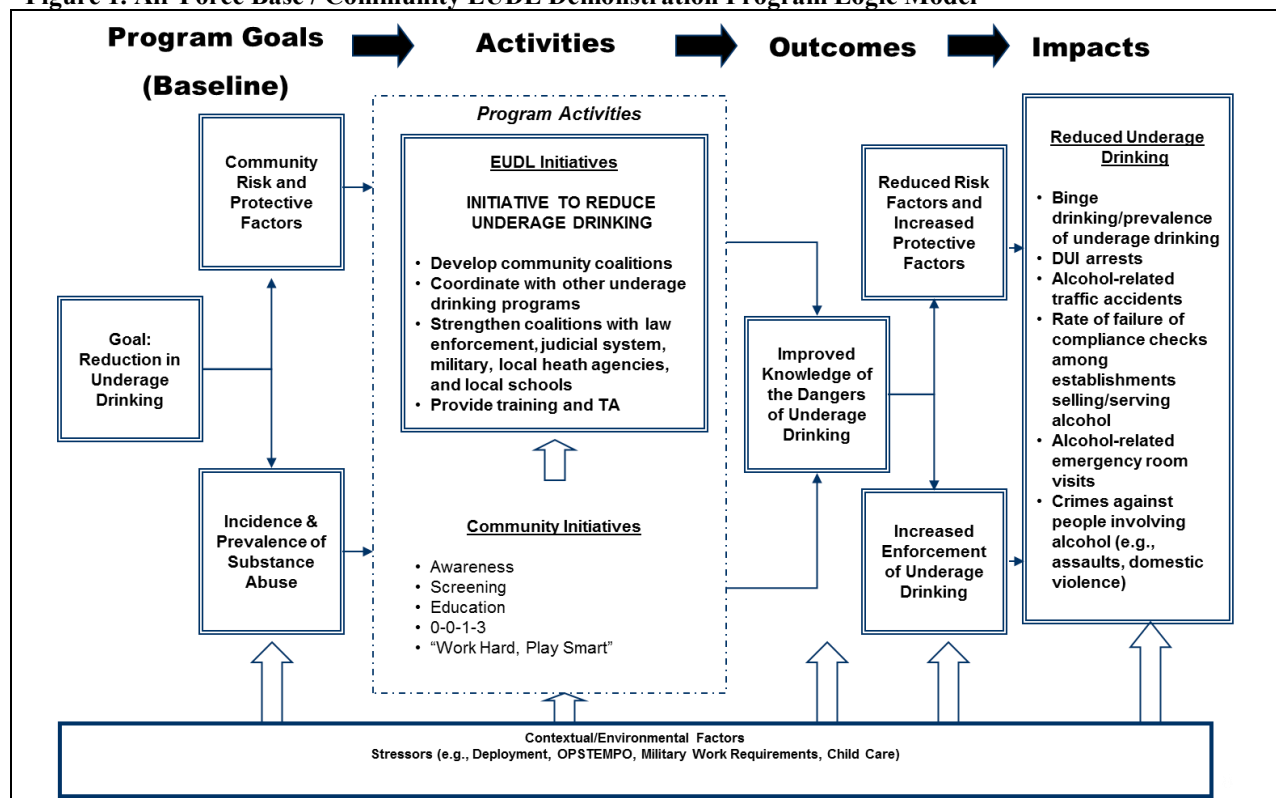
At the core of the EUDL initiative is the notion of a community coalition that aims to collaboratively design interventions that target active duty members living on-base as well as in the community. In some locations, up to 70% of the military forces reside in the local community or “outside the gates” rather than in military housing (Department of Defense, 2010).<sup>4</sup> The demonstration sites spent the first six to twelve months of the grant developing their community coalitions and working with Pacific Institute for Research and Evaluation (PIRE), the EUDL technical assistance contractor, to create a detailed work plan describing the implementation of their interventions. While specific interventions designed at each site varied and were specific to the individual circumstances and challenges within each community, the grant solicitation specified that each site implement best practices that included: (a) development and deployment of community-based awareness media campaigns to reduce drinking, including binge drinking; (b) compliance checks of alcohol retail establishments; (c) strategies to reduce the social availability of alcohol to underage persons; (d) policy changes related to underage drinking; (e) driving while intoxicated (DWI) enforcement focused on underage persons; (e) shoulder tap operations where an underage person attempts to get some 21 years old or older to purchase liquor for him or her; and (f) diversion to social or other activities that do not include drinking.

Each grantee, then, had a great deal of discretion in terms of the specific activities conducted, the scheduling of those activities, and how grant resources are allocated and used, as long as they were within grant guidelines.

### Evaluation Design

The evaluation design can be described as an interrupted time series, with each AFB/community demonstration site paired with a similar AFB/community site as a comparison. The demonstration site implemented the EUDL program using grant funds, while the comparison sites received no funding and did not implement the EUDL program. We defined the intervention starting at the time the work plan was approved, typically within one year of grant award, although the time can be greater or less than this. Figure 1 below graphically depicts a logic model for the AFB/community EUDL demonstration program.

**Figure 1. Air Force Base / Community EUDL Demonstration Program Logic Model**



<sup>4</sup> This trend will continue. DoD has a goal of privatizing 98% of all domestic military housing (GAO, 2009).

The evaluation concerns itself with answering three fundamental research questions: (1) Did the activities implemented by the demonstration sites have an impact on underage drinking and alcohol-related misconducts; (2) If so, what were the impacts in each AFB and community, and (3) How do these results compare with the comparison sites?

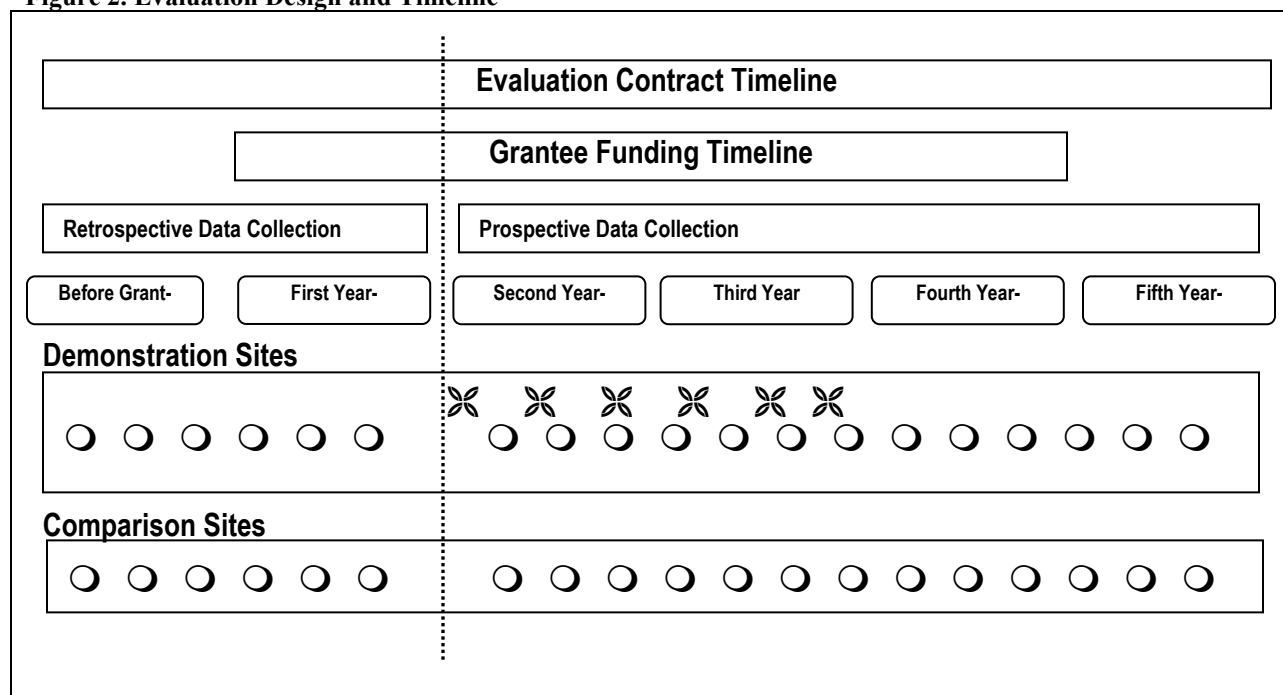
The key outcomes for the evaluation were changes in the following behavioral indicators:

- binge drinking and prevalence of underage drinking;
- DUI arrests;
- alcohol-related traffic accidents;
- rate of failure of compliance checks among establishments selling/serving alcohol;
- alcohol-related emergency room visits; and
- crimes against people involving alcohol such as assaults and acts of domestic violence.

As may be apparent, many of these measures would be obtained from local law enforcement agencies. While developing relationships with local law enforcement was part of each demonstration grantee's activities, this was not the case with the comparison AFB/community sites. The comparison sites were "passive sites" in that there were no formal overtures or other communications about the evaluation with these sites. With no formal explicit role for the comparison sites, there was also no reason or rationale available to persuade local law enforcement to supply arrest and other data to the evaluators. Thus, the comparison sites had one administrative source that could use, as explained later in this paper.

Figure 2 provides a graphical overview and timeline for the evaluation design.

**Figure 2. Evaluation Design and Timeline**



Legend: ✕ = intervention; ○ = data collection.

The figure shows that data collection had two components: a retrospective data collection activity focusing on the two years before grant award and the time after grant award but before work plan approval, and a prospective data collection component focusing on the data once programmatic intervention activities began in earnest. Additionally, the evaluation timeline goes beyond the end of the grant end dates, in order to examine the persistence of any impact effects.

## Core Metrics for the Evaluation

For the evaluation design, we designated a number metrics that could be aggregated and reported monthly - at least in theory. The three types of metrics were:

- Metrics collected or aggregated by each grantee and reported to us monthly<sup>5</sup>
- Metrics gathered from the Air Force-wide database, Substance Use Assessment Tool (SUAT)
- Metrics gathered from the 2006, the 2008, and subsequent Air Force Community Assessment Surveys. These anonymous surveys are administered to over 300,000 active duty Air Force personnel, spouses of Air Force active duty personnel, and the Air Force Reserves. The instrument contains hundreds of questions in which respondents are asked to self-report behaviors of various kinds (e.g., drinking, tobacco use). Because they constitute primary data collection, these will not be part of the results reported here.

Table 2 lists the individual measures, and the source for each. Note that all of these come from various administrative sources. All of the measures involved de-identified data. We did not request any personally identifiable data from any sources.

**Table 2. List of Metrics and Data Sources for Administrative Data**

<b>Common Measures Reporting System (EUDL Sites Only)</b>	
<i><b>Metric</b></i>	<i><b>Source</b></i>
Airmen DWI/DUI <ul style="list-style-type: none"> <li>• Number on-base and off-base</li> <li>• Under 21 years of age and 21+</li> </ul>	Security Forces (Air Force military police equivalent) for on-base  City, county, state law enforcement for off-base
Traffic accidents involving Airmen <ul style="list-style-type: none"> <li>• Number on-base and off-base</li> <li>• Under 21 years of age and 21+</li> </ul>	Security Forces (Air Force military police equivalent) for on-base  City, county, state law enforcement for off-base
Compliance checks <ul style="list-style-type: none"> <li>• Number completed</li> <li>• Number failed</li> </ul>	City, county, state law enforcement
Alcohol-related emergency room visits by Airmen <ul style="list-style-type: none"> <li>• Under 21 years of age and 21+</li> </ul>	Local hospitals and clinics
Crimes involving Airmen where alcohol is a factor <ul style="list-style-type: none"> <li>• For all crimes, incidents involving Airmen under 21 years of age and 21+               <ul style="list-style-type: none"> <li>○ Domestic violence</li> <li>○ Child abuse and neglect</li> <li>○ Crimes against people or pets</li> <li>○ Crimes against property</li> <li>○ Contributing to the delinquency of a minor</li> <li>○ Drunk and disorderly conduct</li> <li>○ Public intoxication</li> <li>○ Minor in possession</li> <li>○ Open container violation</li> </ul> </li> </ul>	Security Forces (Air Force military police equivalent) for on-base  City, county, state law enforcement for off-base

<sup>5</sup> The first five demonstration sites recorded the data monthly, but reported it quarterly. All sites after that initial group reported data monthly.

**Table 2. List of Metrics and Data Sources for Administrative Data**

<b>Air Force Alcohol and Drug Abuse Prevention and Treatment (ADAPT) Program Metrics (EUDL and Comparison Sites)</b>	
<b><i>Metric</i></b>	<b><i>Source</i></b>
Airmen DWI/DUI Reason for Referral <ul style="list-style-type: none"> <li>• Number on-base and off-base</li> <li>• Under 21 years of age and 21+</li> </ul>	Substance Use Assessment Tool (SUAT)
Other Reasons for Referral to ADAPT <ul style="list-style-type: none"> <li>• Domestic violence or other crimes against people or pets/family maltreatment</li> <li>• Drunk and disorderly conduct</li> <li>• Duty related incident</li> <li>• Crimes against property</li> <li>• Public intoxication</li> <li>• Injury</li> <li>• Contributing to the delinquency of a minor</li> <li>• Open container violation</li> </ul>	Substance Use Assessment Tool (SUAT)
Number of underage referrals to ADAPT	Substance Use Assessment Tool (SUAT)
Alcohol related traffic accidents involving Airmen <ul style="list-style-type: none"> <li>• On-base and off-base</li> </ul>	Substance Use Assessment Tool (SUAT)
Binge drinking <ul style="list-style-type: none"> <li>• Number of underage Airmen identified as alcohol dependent</li> </ul>	Substance Use Assessment Tool (SUAT) - SADD Scale score
Airmen reasons for drinking alcohol <ul style="list-style-type: none"> <li>• &lt; 21 year of age <ul style="list-style-type: none"> <li>○ Curiosity</li> <li>○ Taste</li> <li>○ To get drunk</li> <li>○ To be more outgoing</li> <li>○ To have more fun</li> <li>○ To fit in</li> <li>○ It is social</li> <li>○ To relieve boredom</li> <li>○ To deal with stress</li> <li>○ To feel less depressed or anxious</li> <li>○ To sleep better</li> </ul> </li> <li>• 21+ years of age <ul style="list-style-type: none"> <li>○ Curiosity</li> </ul> </li> </ul>	Substance Use Assessment Tool (SUAT) - SADD Scale score

The four administrative sources were: (1) Local law enforcement agencies at the local, county, and state levels; (2) Security Forces, which are the Air Force equivalent of the military police; (3) local hospitals and clinics with emergency room facilities and services; and (4) the Substance Use and Assessment Tool. All metrics, except for the last group on reasons for drinking, were behavioral in nature. We also accessed a fifth source of administrative data: the Air Force Personnel Command for population counts at each of the AFBs, categorized by age group (i.e., under 21 years of age, and 21 and over). There were no issues with regard to the population counts, and we will not discuss this administrative source here.

### **Demonstration Site Air Force Bases and Their Respective Communities**

This section presents information on the Air Force bases and their respective communities to help establish the context for the remainder of the paper. Table 3 lists the AFBs, whether the community around the base is considered urban or rural, and the primary mission of the AFB.

**Table 3 – Demonstration Sites: Air Force Bases and the Communities Around Them**

State	Community	Air Force Base	Urban or Rural	Mission
AZ	Phoenix	Luke AFB	Urban	Combat Operations & Training
AZ	Tucson	Davis-Monthan AFB	Urban	Combat & Support Operations
CA	Yuba County	Beale AFB	Rural	Combat Support Operations.
HI	Honolulu	Hickam AFB	Urban	Combat Support
MT	Great Falls	Malmstrom AFB	Rural	Operational Missile Base
WY	Cheyenne	F.E. Warren AFB	Rural	Operational Missile Base
MO	Warrensburg /Knob Noster	Whiteman AFB	Rural	Air Combat Command / Bomber Wing

Table 4 displays selected demographic characteristics of the AFBs and the surrounding communities. The proportion of problem drinking at pre-test was taken from the Air Force Community Assessment survey data from 2006 for the first five AFBs, and from 2008 for the last two. The percentages reported for the AFBs are consistent and commensurate with national prevalence rates (SAMHSA, 2009). Among the EUDL sites, Whiteman AFB in Missouri had the highest proportion of personnel under the age of 21, and Hickam in Hawaii had the lowest. FE Warren AFB/Cheyenne had the lowest number of liquor establishments as measured by Residents Per Outlet (RPO) and Whiteman AFB/Warrensburg the highest.

**Table 4 – Selected Characteristics of Air Force Bases and the Nearby Communities**

Characteristic	AZ/ Phoenix Luke AFB	AZ/ Tucson Davis Monthan AFB	CA/ Yuba County Beale AFB	HI/ Honolulu Hickam AFB	MT/ Great Falls Malmstro m AFB	WY/ Cheyenne FE Warren AFB	MO/ Warrensburg Whiteman AFB
Number Assigned Personnel <sup>6</sup>	4,586	5,500	3,116	3,767	2,929	3,361	3,600
Number Under 21 Years of Age	217	272	169	109	291	336	377
Percent Under 21	4.7%	4.9%	5.4%	2.9%	9.9%	10.0%	10.5%
Proportion Problem Drinking at Pre-test(E1-E4) <sup>7</sup>	21.5%	22.3%	18.9%	20.0%	24.6%	10.1%	14.7%
Community Population	3,600,000	1,023,320	73,000	375,000	56,690	94,000	52,595
Number of Liquor Outlets <sup>8</sup>	12,932	3,154	276	1,364	156	161	432
Residents Per Outlet	278	324	264	275	363	584	122

The proportion of junior enlisted who scored as “Problem drinkers” varied from a low of 10.1% at Beale AFB, which is in a rural community, to a high of 24.6% at Malmstrom AFB, also in a rural community.

### Data Availability and Acquisition

Table 5 summarizes the data availability and acquisition for each of the seven demonstration sites by type of data. The top row lists the AFBs. The row labeled "Project Year" denotes the grant year. A negative number indicates retrospective data collection, so that, for example, "-2" signifies data for the year that was 2 years before the grant

<sup>6</sup> The number of personnel assigned to an Air Force Base varies constantly. The numbers shown here are the monthly averages for the year in which the demonstration sites submitted grant proposals for this intervention.

<sup>7</sup> The proportion of problem drinkers is measured by a cutoff score of 8 or higher on the AUDIT scale, which was part of the 2006 and 2008 Air Force Community Assessments.

<sup>8</sup> Source is the Alcoholic Beverage Control entity or its equivalent in each state. The data for Great Falls Montana come from the Great Falls Police Department.



award. This first five sites in the table received their demonstration grants in 2006. The last (i.e., right-most) two sites received the grants in 2009.

**Table 5: Data availability by AFB/Community Site and by Data Type**

	AZ - Luke					AZ-Davis-Monthan					CA-Beale					HI-Hickam					MT-Malmstrom					WY-Warren					MO-Whiteman					
Project Year Metric	-2	-1	1	2	3	-2	-1	1	2	3	-2	-1	1	2	3	-2	-1	1	2	3	-2	-1	1	2	3	-2	-1	1	2	3	-2	-1	1	2	3	
DUI/DWI	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Traffic Accidents									●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Compliance Checks		●	●	●	●	●	●	●	●	●					●		●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	
ER Visits											●	●	●		●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Crimes							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SUAT																																				
DUI		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Other Referral Reasons		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●
Underage Referrals		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Traffic Accidents																																				
Binge Drinking																												●								
Reasons for Drinking	●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●	●	●										

Legend: ● fully available, ○ partially available, ■ system not ready or data not requested, □ data not available

All the sites were able to collect at least some form of DUI/DWI data from local law enforcement agencies. The next most available data came from compliance check activities. The compliance checks, most of the time, consisted of an underage person - in many cases an Airman from the neighboring AFB - attempting to purchase liquor from an establishment. If the establishment sold liquor to the covert underage buyer, it was cited, and in some jurisdictions the owners had to appear in court. The two gaps in compliance checks occurred at Beale AFB, where the coalition was not able to get cooperation from the local police to conduct compliance checks, and at F.E. Warren AFB, where no compliance checks were conducted (or data collected and maintained) prior to the grant.

The most problematic data metrics were traffic accidents and emergency room (ER) visits. Those sites that were able to provide traffic accident data spent a significant amount of time abstracting the data from police reports and manually entering them in order to provide them in electronic form. With respect to data on ER visits involving Airmen and alcohol, the local area hospitals and clinics refused to provide data at three of the seven sites, citing HIPAA privacy rules, even though the request was for data in aggregate form, such as the number of underage Airmen seeking ER services in any one month. Those sites with only partial ER visit data availability (F.E. Warren AFB and Whiteman AFB) were missing data for some months and for some clinics and hospitals.

Crime data availability was mixed. Apart from Luke AFB, which was not able to provide any data on the crime metrics, the other sites were able to provide the data. However, we realized, after receipt of the data, that many of the crime metrics were essentially low base-rate phenomena: simply put, they do not occur often enough to be of much use in detecting impact. The crimes with greater frequencies of occurrence by Airmen, and thus more useful, were: drunk and disorderly conduct, public intoxication, and minor in possession.

The bottom half of Table 5 lists the metrics available from SUAT, which is a screening tool that all Airmen referred to ADAPT must complete. The left most blocks of cells are blacked out because the SUAT screening tool was implemented in late 2004 and early 2005, one year before the first five sites received their grants. Thus, SUAT data

were not available earlier than 2005. The SUAT data were complete for referrals due to DUI, due to various other reasons for referral, and for referral because the Airmen were younger than 21 years of age. Virtually no referrals occurred due to traffic accidents, and indicators of binge-drinking were not readily available. The "reasons for drinking" metrics were problematic. It appeared that Airmen simply did not respond to these indicators in completing the screening tool. These latter metrics were dropped for the evaluation of the right-most two sites in the Table.

It is instructive to examine the reasons behind the lack of availability or usefulness, described in Table 6.

**Table 6: Reasons Limiting Data Availability or Utility**

<i>Data Type</i>	<i>Reasons Limiting Availability or Utility</i>	<i>Sites Most Affected</i>
DUI/DWI	Comingling of data by age-groups (under 21, and 21+) Comingling of data for civilians and military Monthly data not available, only annual	AZ-Luke AZ-Davis-Monthan HI-Hickam
Traffic Accidents	No data provided by local law enforcement because of resource constraints Lack of cooperation by some jurisdictions in community Manual reprocessing to provide data in the form needed Monthly data not available, only annual Data only available after citation format was changed to include check box for "Airmen"	AZ-Luke AZ-Davis-Monthan HI-Hickam MO-Whiteman
Compliance Checks	Refusal to conduct compliance checks by law enforcement	CA-Beale
ER Visits	HIPAA Privacy Policy concerns Unable to distinguish between Airmen and civilians Unable to distinguish between under-age and of-age Some hospitals/clinics did not provide but others did	AZ-LUKE AZ-Davis Monthan WY-Warren MO-Whiteman
Crimes	Not reported by local law enforcement Low base-rate phenomenon - low frequency of occurrence Some crimes greater frequency than others Some crimes not reported at all Lack of correspondence with data reported by Security Forces	All
<i>SUAT</i>		
DUI	Reported on-base DUIs only DUIs do not correspond to DUIs from local law enforcement	WY-Warren MO-Whiteman All other AFBs
Referral Reasons	No issues - all sites had data	
Underage Referrals	Low frequency of occurrence	All
Traffic Accidents	No referrals due to traffic accidents	All
Binge Drinking	No data reported	All
Reasons for Drinking	Low frequency of response	All

Those metrics that were the most robust, DUIs and compliance checks, were associated with proactive law enforcement operations. The majority of DUI arrests, for example, was a result of DUI checkpoints, rather than traffic stops by individual law enforcement officers. However, most law enforcement agencies did not keep track of the data that would have been most useful for the evaluation in order to distinguish between Airmen and civilians and underage and of-age persons. In most instances, the most usable DUI data came about because of manual processing of arrest records by program staff or by law enforcement personnel. For this same reasons, traffic accident data was difficult to obtain - there was too much of it, and it was not in the most appropriate form to be usable for assessing impact.

Of course the difficulties in obtaining data was specific to each site, and the success (or lack of thereof) of obtaining data could be attributed, to some extent, to the web of relationships among demonstration program staff, Air Force leadership (especially the Wing Commander), and the various agencies and stakeholders within each AFB/community site. In general, the sites that were the most successful in obtaining data for the evaluation were the ones that had or have the best relationships among all the stakeholders. These sites were: Malmstrom AFB/Great

Falls, MT; Whiteman AFB/Warrensburg MO; and to a lesser extent, F.E. Warren/Cheyenne, WY, and Hickam AFB/Honolulu, HI.

Based on the above tables, as well as qualitative data gathered from site visits to two of the demonstration sites (F.E. Warren AFB/Cheyenne, WY; Whiteman AFB/Warrensburg, MO), we can summarize some the challenges involved in utilizing these data sources.

Table 7 summarizes the challenges and possible responses to those challenges.

**Table 7: Acquisition Challenges by Data Sources and Possible Responses**

<i>Data Source</i>	<i>Data Challenges</i>	<i>Response</i>
Local law enforcement agencies	<ul style="list-style-type: none"> <li>• Number of jurisdictions involved</li> <li>• Number of different data systems</li> <li>• Target formats of the data</li> <li>• Information not ordinarily maintained</li> </ul>	<ul style="list-style-type: none"> <li>• Get buy-in from all law-enforcement jurisdictions in evaluation "catchment area"</li> <li>• Do mapping of current data captured, and data desired to identify gaps</li> <li>• Change data collection forms (e.g., traffic citations) to accommodate administrative data</li> </ul>
Local hospitals and clinics	<ul style="list-style-type: none"> <li>• HIPAA Privacy Concerns</li> <li>• Information not ordinarily reported to outsiders</li> </ul>	<ul style="list-style-type: none"> <li>• Build relationships with hospital/clinic administrators</li> <li>• Ask for data in aggregate form with no PII</li> <li>• Accommodate/alleviate lingering HIPAA concerns</li> <li>• If ER visits are too low to be good metrics, consider eliminating this metric</li> </ul>
ADAPT Referrals (SUAT)	<ul style="list-style-type: none"> <li>• Timeliness</li> <li>• Congruency with data from other sources</li> <li>• Missing data for some metrics, such as binge drinking</li> </ul>	<ul style="list-style-type: none"> <li>• Obtain SUAT data semi-annually or annually, but with monthly totals</li> <li>• Do not expect congruence with local law enforcement data</li> <li>• Focus on DUI, drunk and disorderly, public intoxication, and open container violations only.</li> </ul>
Security Forces	<ul style="list-style-type: none"> <li>• Judge Advocate General (JAG) concerns</li> <li>• Congruence with local law enforcement data</li> <li>• Collaboration with local law enforcement</li> </ul>	<ul style="list-style-type: none"> <li>• Meet and negotiate with JAG officers to ameliorate concerns</li> <li>• Assess the working relationship between Security Forces and local law enforcement and foster collaboration and daily communication between the data</li> </ul>

As Table 7 illustrates, much of the success of acquiring and using administrative data at this very local community-based level depended on relationships and collaboration. Additionally, Table 6 reinforces the notion that one can (and sometimes must) drop metrics that do not contribute to assessing change as a result of the intervention.

## Lessons and Conclusions

When we originally planned the evaluation, we made several assumptions. The first was that retrospective data would be relatively easy to collect because all of the data was being collected by various entities already. We also assumed that, because much of the data would be coming from law enforcement agencies, collecting data during and after the intervention would also be relatively easy. Law enforcement agencies constantly report crime data to other agencies (e.g., the Uniform Crime Reports) and to the public (e.g., maps of police patrol districts and crimes). Finally, we assumed that local law enforcement at these communities would already be working with Security Forces because of the large military presence.

None of these assumptions were completely correct.

Part of this was due to the fact that information needed to make the data usable for the evaluation was not collected, or was buried in the text of the arrest record, rather than being a field in a database that could act as a filter. Much of the data we required had to distinguish between military and civilian status and underage for alcohol (i.e., younger than 21 years of age) versus of-age. All of the law enforcement data systems did not distinguish between military and civilian.<sup>9</sup> For many offenses, adult status is defined as being the age of 18 or older, so there was less attention paid to the 21 years of age threshold, as well.

Virtually all of the sites had to perform some manual processing of data from law enforcement agencies. Typically, this involved going through computerized reports of certain types of police citations, identifying those citations that would be relevant to the data required, going to the original arrest reports, and summarizing the relevant infractions for purposes of the evaluations. At one of the sites, the EUDL Project Coordinator conducted this manual processing on his own time. Another site hired a full-time staff person for the project whose duties consisted largely of culling arrest and citation reports from the local police department and summarizing the results for the evaluation.

Air Force data systems, such as those used by Security Forces, typically used age-categories, such as 18-25 years of age. Obtaining data for underage Airmen entailed special processing.

Those sites that were able to obtain data for the evaluations typically had very strong relationships among the major stakeholders: the Air Force Base command leadership, the EUDL Program project team, and local law enforcement. Where one of these was lacking, data collection efforts suffered.

Among the lessons that we learned are the following:

- Validate all assumptions before starting data collection.
- When planning the evaluation and identifying metrics to use, perform a rigorous gap analysis between the data required to assess impact, and the type and format of administrative data available. In some cases, the gaps may be filled, either by slight or modest changes in procedures or in record-keeping.
- Do not under-estimate the amount of time or resources required to obtain retrospective administrative data. Several sites took almost one year to obtain two years' worth of such data; other sites never succeeded.
- Those metrics that represent low-base rate phenomena may not be worth collecting at all, because the frequency of occurrence is too low. In our experience, the data we could obtain for such crimes as alcohol-related domestic violence was almost non-existent.
- There may be objections from data-source providers, based on interpretations of certain laws. For example, some hospitals and clinics refused to provide any data because of HIPAA Privacy Act concerns. In one case, a JAG officer interpreted some Air Force regulations as limiting the distribution of data to parties outside of the Air Force, such as external evaluators.
- Over time, however, you will be able to identify the most complete and robust administrative measures to use in evaluating the impact of a program.

We applied these lessons to the second group of grantees who received their grants in 2009 (F.E. Warren AFB/Cheyenne, and Whiteman AFB/Warrensburg). We reduced the number of crimes for which we wanted data; we eliminated metrics from the SUAT data; and we worked with the grantees to help them confront many of these issues early on. We are also further refining the metrics for the most recent group of grantees, awarded in 2012. We expect the data collection efforts to be even more improved with them.

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<sup>9</sup> As noted earlier, one site (Davis-Monthan AFB/ Tucson, AZ) influenced the Tucson Police Department to add a check box to the police citation form that indicated whether the person involved was military or not. A second site (F.E. Warren AFB/Cheyenne) was in the process of adding something similar.

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