



Short Communication

Examining the influence of the Enforcing Underage Drinking Laws (EUDL) program on alcohol-related outcomes in five communities surrounding Air Force bases

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ABSTRACT

In 2006, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) awarded discretionary grants to five communities as part of the Enforcing Underage Drinking Laws (EUDL) initiative to implement an environmental strategy approach to reduce drinking and associated misconducts among Air Force members. The evaluation design was a within-site, pre-test/post-test intervention comparison of baseline data to out-year data. Four of the five communities had significant decreases in one or more of the outcomes of interest from pre-test to post-test. Two communities (Great Falls, MT and Tucson, AZ) had a significant decline in the compliance check failure rate of local establishments that sell alcohol. One community (Great Falls, MT) had a significant decline in arrests for possession of alcohol by a minor. Four communities (Great Falls, MT; Tucson, AZ; Phoenix, AZ; Honolulu, HI) had a significant decline in DUI/DWI arrests. These findings build on results reported in an earlier article which provided evidence to suggest that the EUDL program had an influence on self-reported drinking behaviors in three of the five communities. These two articles, in combination, provide evidence to suggest for the *first time* that community-level programs using an environmental strategy approach can be successful in targeting military members.

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1. Introduction

Alcohol use is a serious health concern within the United States military today given the large number of deployments since September 11, 2011, increasing the need to develop effective programs to mitigate risk and promote resilience (see Spera, Thomas, Barlas, Szoc & Cambridge, 2011). An estimated 150,000 to 200,000 military personnel are deployed overseas at any one time and over 2 million troops have been deployed over the past decade (Defense Manpower Data Center, 2010). According to the 2008 Department of Defense Health Related Behavior Survey (Bray et al., 2009), 20% of all service members were heavy alcohol users, a substantially higher rate than among civilians (14%). Heavy episodic or binge drinking is increasing within the military, especially in the underage population, and has been linked to adverse health consequences among personnel (Stahre, Brewer, Fonseca, & Naimi, 2009).

Given the increased deployment stress on the military over the last decade, the current paper centers around a strategy implemented at five communities to influence levels of alcohol use and associated misconducts among Air Force members. As part of the discretionary grant program for the Enforcing Underage Drinking Laws (EUDL) program, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) awarded grants to five communities that are adjacent to Air Force bases (AFB) in the fall of 2006. The grant funds were used in each

community to form a broad-based coalition, with the responsibility of implementing a set of environmental strategies to reduce drinking and associated alcohol-related misconducts among Air Force members, with a focus on the underage active duty population.

The grants were awarded to these five communities in 2006 for a period of three years, and each community began implementing the intervention after its work plan was approved by OJJDP. The communities that were awarded a grant included: (a) Great Falls, Montana with Malmstrom AFB; (b) Tucson, Arizona with Davis–Monthan AFB; (c) Phoenix, Arizona with Luke AFB; (d) Honolulu, Hawaii with Hickam AFB; and, (e) the greater Sacramento area in California with Beale AFB.

The current paper presents findings on the influence of the EUDL military discretionary grant program on three key outcomes: 1) compliance check failure rate (i.e., the percentage of alcohol outlets that failed a covert underage buying check); 2) arrests for alcohol possession by a minor, and; 3) arrests for driving under the influence/driving while intoxicated (DUI/DWI). An earlier paper presented the results of the EUDL program's influence on self-reported drinking behaviors in three of the five communities (see Spera et al., 2010).

2. Method

2.1. Evaluation design

The design for this evaluation was a within-site, pre-test/post-test intervention comparison for which we compared baseline data from the years leading up to the EUDL intervention activities to the time

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period during and after the intervention. The demonstration sites were awarded funding in October of 2006 for a period of three years, with several of the sites receiving a no-cost grant extension for an additional 6–12 months. Since the coalition's intervention activities could not begin until after their work plan was approved by OJJDP, the date of work plan approval served as our cut point between the pre- and post-intervention comparisons for each community.

2.2. Intervention activities

Each demonstration community implemented a set of environmental strategies:

- Enforcement aimed at reducing the social availability of alcohol (e.g., shoulder tap operations involving drinker ID verification, controlled party dispersal operations).
- Compliance checks of local liquor establishments to ensure that the establishments were not selling alcohol to underage active duty members (using covert underage buyers).
- Impaired driving enforcement (i.e., increased number and frequency of driving under the influence [DUI] checks in the community).
- Local policy development, such as working to educate state legislatures on the issues of underage drinking that may lead to changes in policies and laws (e.g., orienting the photos on licenses of underage and adult drivers differently, such as head-on versus profile, or left-side versus right-side).
- Development and deployment of a community-based awareness/media campaign to reduce drinking, including heavy drinking; all sites utilized the 0–0–1–3 message in their campaign, as well as web sites discouraging underage drinking.
- Offering of alternative activities that do not include drinking (e.g., sports activities, talent competitions, shopping trips).

Table 1 presents the number and type of intervention activities conducted during the pre- and post-test periods for each community.

2.3. Data collection and measures

The data for the current study were collected by each respective community, working closely with the local police department, security forces on the Air Force base, and other community agencies.

When possible, outcome data were collected for Air Force members under and over the legal drinking age, and in other cases, data were collected on all members living in the community (i.e., both active duty and civilian) for outcomes such as DUI/DWIs or compliance checks in which all community members had exposure because the activities were conducted in the off-base local area. Compliance check data were gathered at the establishment level, irrespective of whether the covert underage buyer was an active duty member or not. The source for data reported in this study by community is footnoted in Table 2.

3. Results

We calculated chi-square tests of significance that compared the number of pre- and post-intervention incidents taking into account community size.

3.1. Overall findings across sites

Table 2 presents the overall findings for EUDL grantees based on assessing significant differences from pre-test to post-test. Four of the five communities had significant decreases in the outcomes of interest from pre-test to post-test. Two communities (Great Falls, MT and Tucson, AZ) had a significant decline in the compliance check failure rate for local establishments that serve alcohol. One community (Great Falls, MT) had a significant decline in arrests for possession of alcohol by a minor from pre-test to post-test. Four communities (Great Falls, MT; Tucson, AZ; Phoenix, AZ; Honolulu, HI) had a significant decline in DUI/DWI arrests from pre-test to post-test. One exception was that the decline in DUI/DWI arrests for Tucson, AZ was only for individuals under the legal drinking age and rates significantly increased for those of the legal drinking age.

Examining the data by community reveals the largest number of findings (four) for Great Falls, MT, which had a significant decrease in the compliance check failure rate, arrests for possession of alcohol by a minor, and DUI/DWIs for active duty members of legal age and all ages. The Phoenix, AZ community had three significant drops which were in DUI/DWI arrests of those underage, of-age, and all individuals. Both Tucson, AZ and Honolulu, HI had two significant declines, with Tucson showing a decline in compliance check failures and DUI/DWI arrests for underage individuals, and Honolulu showing a

Table 1
Number and type of intervention activities from pre-test to post-test for the five communities.

| EUDL core activity categories | | Great Falls, MT/ Malmstrom AFB | | Tucson, AZ/ Davis–Monthan AFB | | Phoenix, AZ/ Luke AFB | | Honolulu, HI/ Hickam AFB | | Sacramento, CA/Beale AFB | |
|-------------------------------|---|-----------------------------------|------|-------------------------------------|------|--------------------------|------|-----------------------------|------|-----------------------------|------|
| | | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| 1 | Enforcement aimed at reducing the social availability of alcohol (e.g. controlled party dispersal operations) | 1 | 2 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 2 |
| 2 | Compliance check operations of local liquor establishments to ensure that they are not selling to underage active duty members (CUB check operations) | 2 | 4 | 0 | 19 | 0 | 18 | 1 | 3 | 0 | 1 |
| 3 | Impaired driving enforcement operations (i.e., increased number and frequency of driving under the influence [DUI] checks) | 0 | 3 | 0 | 6 | 0 | 21 | 3 | 11 | 0 | 6 |
| 4 | Local policy development | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 1 |
| 5 | Community-based awareness events and campaigns to reduce drinking, including binge drinking | 16 | 49 | 6 | 3 | 5 | 8 | 0 | 50 | 0 | 0 |
| 6 | Offering of alternative activities that do not include drinking | 2 | 29 | 13 | 17 | 6 | 5 | 0 | 10 | 0 | 4 |
| Total number of activities | | 21 | 88 | 19 | 47 | 11 | 54 | 4 | 80 | 0 | 14 |
| Total | | 109 | | 66 | | 65 | | 84 | | 14 | |

The cut-point between the pre- and post-tests was based on the month and year of grantee work plan acceptance by the funding agency (OJJDP). It varied slightly for each of the five grantees (1 – Great Falls, MT = July 2007; 2 – Tucson, AZ = Nov 2007; 3 – Phoenix, AZ = Nov 2007; 4 – Honolulu, HI = Jan 2008; 4 – Sacramento, CA = Oct 2007).

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