AZ HEALTH SURVEY

2010 SURVEY DATA

PREPARED BY SOUTHWEST INTERDISCIPLINARY RESEARCH CENTER AND
CENTER FOR VIOLENCE PREVENTION & COMMUNITY SAFETY, ARIZONA STATE UNIVERSITY

Substance Use and Mental Health Problems

among Arizona Veterans

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THIS REPORT WAS PREPARED BY
DAVID CHOATE, ASSOCIATE DIRECTOR, OPERATIONS, CENTER FOR VIOLENCE PREVENTION & COMMUNITY SAFETY
WENDY L. WOLFERSTEIG, ASSISTANT DIRECTOR SIRC, EVALUATION & PARTNER CONTRACTS
TRAVIS JOHNSON, GRADUATE STUDENT, SIRC
FLAVIO F. MARSIGLIA, PRINCIPAL INVESTIGATOR, DIRECTOR, SIRC
CHARLES KATZ, DIRECTOR, CENTER FOR VIOLENCE PREVENTION & COMMUNITY SAFETY

SOUTHWEST INTERDISCIPLINARY RESEARCH CENTER
SCHOOL OF SOCIAL WORK – COLLEGE OF PUBLIC PROGRAMS
411 N. CENTRAL AVENUE, SUITE 720, PHOENIX, AZ 85004-0693
PH 602.496.0700 | FX 602.496.0958
SIRC@ASU.EDU | HTTP://SIRC.ASU.EDU

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2929 NORTH CENTRAL AVENUE, SUITE 1550, PHOENIX, AZ 85012
PH 602.385.6500 | FX 602.385.6510 | WWW.SLHI.ORG

Introduction

The 2010 Arizona Health Survey data offer health perspectives on many diverse topics and populations. This examination of veterans' health adds to understanding the concerns that need to be addressed for this group. These results also foreshadow the anticipated wave of veterans from Afghanistan and Iraq who will be separating from the military in the next several years, bringing with them the need for substance use and mental health services.

> Two million troops have already served in Iraq and Afghanistan. The VA believes there could be thousands more homeless in part because of the combat stress and brain injuries that roadside bombs inflict. Already, a quarter of a million troops have asked for mental health treatment. (CBS News, 2010)

Cited from published studies, the U.S. Department of Military Affairs (2010) website outlines the following information on national population data compared to veteran data for the occurrence of Post-Traumatic Stress Disorder (PTSD).

Here are some facts (based on the U.S.):

- About 7-8 percent of the population will have PTSD at some point in their lives.
- About 5.2 million adults have PTSD during a given year. This is only a small portion of those who have gone through a trauma.
- Women are more likely than men to develop PTSD. About 10 percent of women develop PTSD sometime in their lives compared with 5 percent of men.

Experts think PTSD occurs:

- In about 11-20 percent of veterans of the Iraq and Afghanistan conflicts (Operations Iraqi and Enduring Freedom), or in 11-20 veterans out of 100.
- In as many as 10 percent of Gulf War (Desert Storm) veterans, or in 10 veterans out of 100.
- In about 30 percent of Vietnam veterans, or about 30 out of 100 Vietnam veterans.

The related Arizona data in this report, from the 2010 Arizona Health Survey conducted by St. Luke's Health Initiatives, were gathered through telephone interviews of 8,215 adult heads of household living in Arizona. Health-related information is gathered through surveys with voluntary, anonymous adult respondents. In addition to a range of health questions, the survey includes questions about mental and behavioral health problems as well as substance use and misuse. Respondents were selected using Random Digit Dialing (RDD), a procedure that excludes businesses and includes unlisted residential telephone numbers. More details about the survey instrument and methodology for the 2010 Arizona Health Survey can be found at www.arizonahealthsurvey.org.

Veterans and Problems Arising from Service

A study looking at troops who had served in Iraq found that about one in eight reported symptoms of Post-Traumatic Stress Disorder (PTSD). The survey also found that less than half of those troops who reported symptoms sought help (Associated Press, June 30, 2004). Equally alarming is the number of troops suffering from traumatic brain injuries (TBI). Researchers screening returning soldiers found that about 20 percent experienced at least a minor head injury during service in Iraq (USA Today, June 7, 2006). Hoge et al. surveyed 2,525 US Army infantry troops 3-4 months after returning from deployment and found that approximately 15 percent reported experiencing TBI. Other common signs and symptoms of these war-related conditions include decreased attention span, lack of motivation, irritability, depression and anxiety, increased fatigue, headaches, memory loss or disturbance, disrupted sleep and other behavioral issues (Hoge et al., 2008).

Compounding the issues of TBI, PTSD and other mental and behavioral problems are increased risk for substance use problems. Data collected from 2004 through 2006 by the National Survey on Drug Use and Health (NSDUH) found that 25 percent of veterans aged 18-25 were at risk for a substance use disorder in the past year (NSDUH, 2007). The potential risk and associated problems with substance misuse are alarming in themselves, but taken together with the rates of TBI and mental health problems, veterans returning from service in combat zones like Iraq and Afghanistan are at significant risk.

Demographic Characteristics of Veterans in Arizona

Beyond the broad scope of interest in the veteran population as a whole, understanding the potential emergence of problems facing veterans returning from deployment in Iraq and Afghanistan is of critical concern. Using the data collected from the 2010 Arizona Health Survey, the Arizona veteran population data were analyzed. To better understand both existing issues as well as potentially emerging ones, the veteran respondents were divided into two categories: 1) veterans who had served in either or both the Iraq or Afghanistan conflicts and 2) other veterans. Comparing these two categories of veterans to the non-veteran portion of the sample provided the ability to identify possible existing issues of mental health and substance abuse for veterans generally and identify emerging issues facing more recent veterans.

Exhibit 1 shows the demographic comparison of non-veterans to the two categories of veterans. Veterans differ from non-veterans in every category, and there are some differences between veteran categories. Veterans were disproportionately male (more than 90 percent of both veteran categories were male, compared to about 44 percent of non-veterans). Veterans were less likely to be below the poverty level, slightly more than 5 percent of respondents in each veteran category, compared to 18.7 percent of non-veterans. Veterans were also more likely to be more than 300 percent above the poverty level, where more than 61 percent of Iraq/Afghanistan veterans were in this group and almost 58 percent of other veterans, compared to about 45 percent of non-veterans. Veterans in both categories were also more likely to have insurance (approximately 95-97 percent) than non-veterans (about 83 percent).

For age and race/ethnicity, the differences were less consistent between veterans and non-veterans. Not surprisingly, Iraq/Afghanistan veterans were younger than other veterans and non-veterans. Almost 80 percent of Iraq/Afghanistan veterans were 39 years or younger, compared to about 13 percent of other veterans and 43 percent of non-veterans. Non-veterans and Iraq/Afghanistan veterans were more similar in race/ethnicity, with about 65 percent of non-veterans and approximately 63 percent of Iraq/Afghanistan veterans identifying as non-Hispanic White, compared to almost 83 percent of other veterans. Non-veterans and other veterans reported Black/African-American similarly (3.5 and 3.4 percent, respectively), while Iraq/Afghanistan veterans reported their race/ethnicity as Black/African-American at much higher rates (13.5 percent).

Exhibit 1: Demographic Characteristics by Veteran Status

	IRAQ/AFGHANISTAN VETERAN		OTHER VETERAN		NON-VETERAN		TOTAL	
	n	%	n	%	n	%	n	%
Gender *								
Male	102	90.3	722	94.1	3,258	44.4	4,082	49.7
Female	11	9.7	46	5.9	4,076	55.6	4,133	50.3
Age Category *								
18-28	52	45.8	14	1.8	1,597	21.8	1,663	20.2
29-39	38	33.4	85	11.1	1,581	21.6	1,704	20.7
40-49	14	12.9	84	11.0	1,357	18.5	1,455	17.7
50-59	6	5.4	122	15.9	1,204	16.4	1,332	16.2
60-69	3	2.3	194	25.3	809	11.0	1,006	12.2
70 and older	0	0.2	268	34.9	787	10.7	1,055	12.8
Race or Ethnicity *								
White	70	62.5	634	82.5	4,784	65.2	5,488	66.8
Hispanic or Latino	21	18.5	77	10.1	1,795	24.5	1,893	23.0
Black/African-American	15	13.5	26	3.4	260	3.5	301	3.7
Asian, Pacific Islander, or Native Hawaiian	4	3.4	4	0.6	136	1.9	144	1.8
American Indian	2	2.1	13	1.6	304	4.1	319	3.9
Other	0	0.0	2	0.3	11	0.2	13	0.2
Income Range *								
Less than $11,000	0	0.0	29	5.5	324	7.0	353	6.8
$11,000 - $19,999	7	9.5	32	6.0	409	8.8	448	8.6
$20,000 - $29,999	2	3.3	67	12.7	549	11.9	618	11.8
$30,000 - $49,999	14	20.4	110	20.9	1,006	21.7	1,130	21.6
$50,000 - $74,999	26	38.0	105	20.0	764	16.5	895	17.1
$75,000 - $99,999	6	8.5	88	16.8	639	13.8	733	14.0
$100,000 or more	14	20.3	96	18.2	937	20.2	1,047	20.0
Poverty Level *								
Below (<100% PL)	6	5.9	39	6.2	1,088	18.7	1,133	17.3
100% - 200% PL	14	14.1	117	18.8	1,163	19.9	1,294	19.7
201% - 300% PL	18	18.7	106	17.1	951	16.3	1,075	16.4
Above 300% PL	59	61.3	358	57.8	2,630	45.1	3,047	46.5
Insurance Status *								
No Insurance	3	2.8	40	4.1	1,267	17.8	1,310	16.3
Geographic Service Area *								
Apache, Coconino, Mohave, Navajo, Yavapai	4	3.8	112	14.6	834	11.4	950	11.6
La Paz, Yuma	3	2.8	36	4.7	228	3.1	267	3.3
Cochise, Graham, Greenlee, Santa Cruz	6	5.2	31	4.0	231	3.1	268	3.3
Gila, Pinal	3	2.3	45	5.9	413	5.6	461	5.6
Pima	27	24.2	117	15.2	1,189	16.2	1,333	16.2
Maricopa	69	61.7	428	55.7	4,439	60.5	4,936	60.1

* Indicates significant at $p \leq .05$ using Chi-square test.

Alcohol Use among Arizona Veterans

Alcohol use among veterans, particularly among Iraq/Afghanistan veterans, was alarming. Respondents were asked a series of questions on alcohol use to distinguish the occasional users from the more frequent users. Specifically, they were asked on how many days during the past 12 months they had consumed five or more drinks in a single day. This question is an approximation for binge drinking events. While the exact definition for binge drinking calls for five or more drinks on a single *occasion*, substituting *days* in this context does not adversely affect the estimation of binge drinking. Additionally, respondents were asked during the past 30 days, how many alcoholic drinks per day, on *average*, had they consumed.

It is indeed distressing that Iraq/Afghanistan veterans were significantly more likely to report *heavy* drinking than other respondents. More than 44 percent of Iraq/Afghanistan veterans reported at least one binge drinking event in the past 12 months compared to about 19 and 22 percent for other veterans and non-veterans, respectively. Almost 44 percent of Iraq/Afghanistan veterans averaged at least one day per month, in the past 12 months, when they consumed five or more drinks per day. This rate for Iraq/Afghanistan veterans was twice the rate for both other veterans (18.9 percent) and non-veterans (22.3 percent).

Similarly alarming was the high rate of average binge drinking among the Iraq/Afghanistan veteran sample. More than five percent of Iraq/Afghanistan veterans reported that during the past 30 days they, on average, drank five or more alcoholic drinks per day. In other words, 1 in 20 of these veterans reported binge drinking every day in the past month. This was almost four times the 1.3 percent of both other veterans and non-veterans, who reported the same heavy drinking habits in the past 30 days (see Exhibit 2).

Exhibit 2: Alcohol Use in Past 12 months by Veteran Status

	IRAQ/AFGHANISTAN VETERAN		OTHER VETERAN		NON-VETERAN		TOTAL	
	n	%	n	%	n	%	n	%
Alcohol in past 12 months *								
5+ drinks in a single day	49	43.8	145	18.9	1,639	22.3	1,833	22.3
Number of days 5+ drinks in past 12 months *								
0 days	64	56.2	623	81.1	5,695	77.7	6,382	77.7
1-12 days	27	23.9	103	13.4	1,228	16.7	1,358	16.5
13 or more days	22	19.8	42	5.5	411	5.6	475	5.8
Average Binge Drinking (average 5+ per day) in past 30 days								
Average Binge Drinker	6	5.1	10	1.3	93	1.3	109	1.3

* Indicates significant at $p \leq .05$ using Chi-square test.

Illicit Drug Use among Arizona Veterans

Abuse of substances unfortunately extended beyond the misuse of alcohol, to misuse of prescription medications and illicit drugs. Respondents were asked about their use of marijuana, crack and powder cocaine, heroin, methamphetamine, prescription drugs and any other illicit drugs.

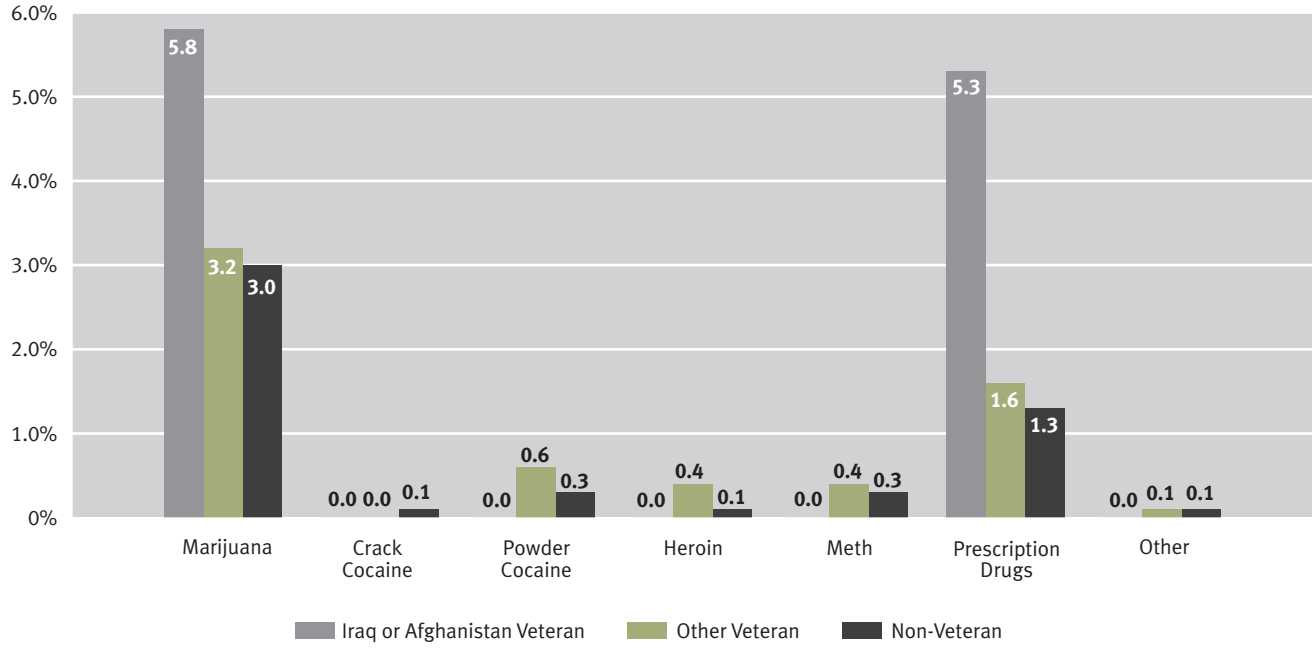
The reported rates of illicit drug use were very low across all respondents. However, Iraq/Afghanistan veterans reported significantly higher use rates of both marijuana (5.8 percent) and prescription drugs (5.3 percent) in the past 30 days. This compared to only about 3 percent of both other veterans and non-veterans who reported using marijuana in the past 30 days, and 1.6 and 1.3 percent, respectively, who reported using prescription drugs inappropriately (see Exhibits 3 and 4).

Exhibit 3: Illicit Drug Use by Veteran Status

	IRAQ/AFGHANISTAN VETERAN		OTHER VETERAN		NON-VETERAN		TOTAL	
	n	%	n	%	n	%	n	%
Ever used illicit drugs *								
Yes	43	38.6	206	26.8	2,291	31.2	2,540	30.9
Last time used illicit drugs								
Never or more than 12 months ago	100	71.1	734	83.5	6,847	78.8	7,681	79.0
Past 12 months	6	13.8	5	2.3	259	11.3	270	10.6
Past 30 days	7	15.1	29	14.2	228	9.9	264	10.4
MARIJUANA								
Used in past 12 months	13	100.0	28	84.0	423	86.9	464	87.0
Days used in past 30 days								
None	106	94.2	744	96.8	7,117	97.0	7,967	97.0
1 to 5 days	0	0.0	9	1.2	80	1.1	89	1.1
6 to 10 days	0	0.0	3	0.5	44	0.6	47	0.6
11 to 19 days	0	0.0	0	0.0	28	0.4	28	0.3
20 or more days	7	5.8	11	1.5	66	0.9	84	1.0
CRACK COCAINE								
Used in past 12 months	0	0.0	4	10.8	7	1.4	11	2.0
Days used in past 30 days								
None	112	100.0	767	100	7,329	100	8,208	100
1 to 5 days	0	0.0	0	0.0	3	0.0	3	0.0
6 to 10 days	0	0.0	0	0.0	0	0.0	0	0.0
11 to 19 days	0	0.0	0	0.0	0	0.0	0	0.0
20 or more days	0	0.0	0	0.0	2	0.0	2	0.0
POWDER COCAINE								
Used in past 12 months	1	6.6	6	17.0	87	17.9	94	17.6
Days used in past 30 days								
None	112	100.0	764	99.4	7,306	99.7	8,183	99.7
1 to 5 days	0	0.0	2	0.3	25	0.3	27	0.3
6 to 10 days	0	0.0	2	0.3	0	0.0	2	0.0
11 to 19 days	0	0.0	0	0.0	3	0.0	3	0.0
20 or more days	0	0.0	0	0.0	1	0.0	1	0.0
HEROIN								
Used in past 12 months	0	0.0	3	8.5	18	3.6	21	3.8
Days used in past 30 days								
None	112	100.0	765	99.6	7,324	99.9	8,201	99.9
1 to 5 days	0	0.0	1	0.1	1	0.0	2	0.0
6 to 10 days	0	0.0	0	0.0	0	0.0	0	0.0
11 to 19 days	0	0.0	2	0.3	0	0.0	2	0.0
20 or more days	0	0.0	0	0.0	9	0.1	9	0.1
METHAMPHETAMINE								
Used in past 12 months	0	0.0	3	8.1	53	10.9	56	10.5
Days used in past 30 days								
None	112	100.0	765	99.6	7,313	99.7	8,190	99.7
1 to 5 days	0	0.0	0	0.1	14	0.2	14	0.2
6 to 10 days	0	0.0	0	0.0	0	0.0	0	0.0
11 to 19 days	0	0.0	0	0.0	4	0.1	4	0.1
20 or more days	0	0.0	2	0.3	3	0.0	5	0.1
OTHER DRUGS								
Used in past 12 months	0	0.0	1	1.6	47	9.6	48	8.9
Days used in past 30 days								
None	112	100.0	768	99.9	7,327	99.9	8,207	99.9
1 to 5 days	0	0.0	0	0.0	7	0.1	7	0.1
6 to 10 days	0	0.0	0	0.0	0	0.0	0	0.0
11 to 19 days	0	0.0	0	0.0	1	0.0	1	0.0
20 or more days	0	0.0	1	0.1	0	0.0	1	0.0
PRESCRIPTION DRUGS								
Never or more than 12 months ago	104	92.0	731	95.3	6,952	95.2	7,788	95.2
Past 12 months	3	2.7	24	3.1	256	3.5	283	3.4
Past 30 days	6	5.3	12	1.6	93	1.3	111	1.4

* Indicates significant at $p \leq .05$ using Chi-square test.

Exhibit 4: Percent Reporting Illicit Drug Use in the Past 30 Days by Veteran Status



Mental Health Problems among Arizona Veterans

The Arizona Health Survey included the Kessler-6 (K6) questions in order to estimate the general level of psychological distress of respondents. Although the psychological distress is non-specific, and the K6 is not a diagnostic tool, it has been shown to be a very reliable estimation for acute psychiatric distress (Kessler et al., 2002). Respondents were also asked whether they had been diagnosed by a mental health professional as having a mental health problem. Finally, they were asked whether they had experienced a mental health problem from a list, regardless of whether they had ever received help or been diagnosed for the condition.

Iraq/Afghanistan veterans were more than twice as likely (35.2 percent) to report having been diagnosed with a mental health problem as other veterans (13.1 percent) or non-veterans (16.9 percent). However, Iraq/Afghanistan veterans were least likely to report psychological distress (9.8 percent) on the K6, whereas non-veterans reported distress most frequently (17.7 percent), followed by other veterans (12 percent).

The American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders–IV* (1994), provides four brief criteria to qualify for the substance abuse classification. Respondents to the 2010 Arizona Health Survey were asked four questions mirroring these criteria. Respondents were asked if in the past 12 months, they had: 1) spent more time drinking or using drugs than they intended; 2) neglected some of their usual responsibilities because of substance use; 3) had anyone objected to their drinking or drug use (e.g. family, friends, co-workers); and 4) used drugs or alcohol to relieve feelings of sadness, anger or boredom. By definition, if an individual meets one of these four criteria during the past 12 months they are classified as having a substance abuse problem.

Using the APA criteria, Iraq/Afghanistan veterans reported substance abuse problems (27.9 percent) significantly more often than other veterans (14.9 percent), and slightly more frequently than non-veterans (26.0 percent). Taken together, while significantly more likely to have been diagnosed with a mental health problem and to report substance abuse problems, Iraq/Afghanistan veterans were less likely to report psychological distress than other respondents (see Exhibit 5).

Exhibit 5: Mental Health and Substance Abuse Problems by Veteran Status

	IRAQ/AFGHANISTAN VETERAN		OTHER VETERAN		NON-VETERAN		TOTAL	
	n	%	n	%	n	%	n	%
Mental Health Condition *								
Diagnosed	40	35.2	101	13.1	1237	16.9	1378	16.8
Psychological Distress (Kessler-6) *								
Yes	11	9.8	92	12.0	1299	17.7	1402	17.1
Substance Abuse Risk *								
Yes	23	27.9	76	14.9	1266	26.0	1365	25.0

* Indicates significant at $p \leq .05$ using Chi-square test.

Conclusion

The number of veterans and particularly the potential number of veterans returning from the conflicts in Iraq and Afghanistan to Arizona presents a serious challenge to the state's intervention and treatment resources in dealing with these substance abuse and mental health problems. The impact on individuals of serving in a combat zone, the rates of TBI, PTSD, substance misuse and other behavioral issues they often face, will present challenges to Arizona's systems of health care, behavioral health care, substance abuse treatment and criminal justice unless proper awareness and preparation are undertaken.

The resources of Veterans Affairs cannot be relied upon as the sole response to the challenge. Those veterans who did not serve in Iraq or Afghanistan are not significantly different from non-veterans in substance abuse and mental health problems although they do have these problems to some degree that must be addressed. However, those veterans who served in Iraq or Afghanistan are at significantly greater risk than other veterans for substance abuse or mental health problems. They were four times as likely to report binge drinking every day, on average, during the past 30 days. Indeed, they were more than twice as likely to have been diagnosed with a mental health problem. The potential for the compounded risk of a co-occurring disorder (substance abuse/dependence and mental illness) is alarming. Notably, these veterans are continuing to come home and need services. The broad community of health care, behavioral health care and substance abuse treatment providers must be called upon to respond to this emerging problem.

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