SUMMARY: Data from the California Health Interview Survey (CHIS) from 2011–2013 showed approximately 90,000 veterans had mental health needs and 200,000 reported serious thoughts of suicide during the 12 months prior to participating in CHIS. Although the proportion of veterans reporting mental health need or serious psychological distress was no higher than the general population, California veterans were more likely to report lifetime suicide ideation. This policy brief uses CHIS data to examine the mental health status, needs, and barriers to care among veterans in California. Veterans were more likely to receive mental health or substance use treatment than nonveterans, yet three of four veterans with mental health needs received either inadequate or no mental health care. Integrating mental and physical health services, increasing access to care, retaining veterans who seek mental health treatment, and reducing stigma are among the strategies that might improve the mental health of California's veterans.

Mental health problems have significant costs and consequences for veterans, their families, and communities. Studies suggest individuals with military service histories have increased risks of suicidal ideation and certain forms of mental health stress. Treatment for major depression and posttraumatic stress disorder (PTSD) among Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) veterans was estimated to cost $4-$6.2 billion over two years. This figure excluded costs related to substance use, family strain, and other factors.

California's Mental Health Services Act (Proposition 63) generated funding to support mental health programs across the state and reduce the long-term impact of untreated serious mental illness. Much of what is known about the mental health of veterans is based on Veterans Health Administration (VHA) data, which exclude veterans not connected with VHA and/or those not eligible for VHA care. In 2014, 42 percent of U.S. veterans were VHA-enrolled. As a result, information on the mental health needs of the majority of veterans who obtain health care outside of VHA is limited, and other sources are needed to understand the mental health burden of all veterans living in California.

CHIS is a population-based health survey conducted by the UCLA Center for Health Policy Research that covers a wide range of health topics, including serious psychological distress, functional limitations due to emotional issues, and mental health treatment. CHIS provides researchers and policymakers a unique opportunity to assess over time the mental health status of veterans. In this policy brief, veterans are defined as adult respondents who served in the U.S. Armed Forces for at least one year. The brief presents average annual estimates using CHIS 2011, 2012, and 2013 and provides a current mental health profile for California veterans, identifies veterans
with the greatest mental health needs, and describes gaps in mental health treatment and barriers to treatment.

**Characteristics of the Veteran Population in California**

Veterans represented 7.2 percent (1,984,000) of the general population in California between 2011 and 2013. An overwhelming majority of veterans were men (92.4 percent). An overwhelming majority of veterans were men (92.4 percent). Veterans are also a much older group compared to nonveterans (see Exhibit 1). One of five (20.0 percent; 397,000) veterans were ages 18–44; one-third (34.3 percent; 682,000) were ages 45–64; and nearly half (45.7 percent; 905,000) were age 65 or older. In contrast, over half (53.1 percent; 13,598,000) of nonveteran adults were between the ages of 18 and 44. A majority of veterans in California identified as non-Hispanic white (67.0 percent; 1,329,000), 14.9 percent (296,000) identified as Hispanic or Latino, 9.0 percent (179,000) identified as African-American or Black, and 9.1 percent (180,000) identified with another race or more than one race.

California veterans served an average of 6 years in the military, and their service spanned numerous war campaigns from World War II to the current campaigns in Iraq and Afghanistan (see Exhibit 2). Over one-third (37.3 percent; 708,000) of surveyed veterans reported service during the Vietnam War. Approximately 122,000 veterans (6.4 percent) served during World War II, 228,000 (12.0 percent) served

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**Exhibit 1**

<table>
<thead>
<tr>
<th>Age</th>
<th>Veteran</th>
<th>Nonveteran</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>18-44</td>
<td>397,000</td>
<td>20.0</td>
</tr>
<tr>
<td>45-64</td>
<td>682,000</td>
<td>34.3</td>
</tr>
<tr>
<td>65 and older</td>
<td>905,000</td>
<td>45.7</td>
</tr>
<tr>
<td>Total</td>
<td>1,984,000</td>
<td></td>
</tr>
</tbody>
</table>

Percentages may not add up to 100% due to rounding.


**Exhibit 2**

<table>
<thead>
<tr>
<th>Period of Service</th>
<th>Percent of Veterans</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIF/OEF – post 9/11</td>
<td>15.6%</td>
</tr>
<tr>
<td>Gulf War – pre 9/11</td>
<td>12.0%</td>
</tr>
<tr>
<td>Vietnam War</td>
<td>37.3%</td>
</tr>
<tr>
<td>Korean War</td>
<td>14.5%</td>
</tr>
<tr>
<td>World War II</td>
<td>6.4%</td>
</tr>
<tr>
<td>Peacetime Only</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

Some veterans’ service periods spanned multiple periods. Percentages will not add up to 100%.

Unadjusted and Adjusted Proportions of Serious Psychological Distress and Mental Health Need by Veteran Status, CHIS 2011-2013

Exhibit 3

The proportions of serious psychological distress were not found to differ significantly between veterans (3.6 percent) and nonveterans (4.1 percent).

Between 2011 and 2013, approximately 4.5 percent of veterans (90,000) in California had indications of mental health need (serious psychological distress and impairment in one or more life domains). The majority of these veterans were non-Hispanic white (60.1 percent; 55,000), 45 years of age and older (67.0 percent; 62,000), and/or had less than a bachelor’s degree (79.6 percent; 72,000). Approximately one-fifth (19.4 percent; 17,000) of veterans with mental health needs identified as Latino or Hispanic, although Latino veterans comprised only 14.9 percent (296,000) of surveyed veterans. A large majority of veterans with mental health needs (78.5 percent; 73,000) were disabled due to a physical or mental health condition. Nearly half of the veterans with mental health needs (48.4 percent; 45,000) also had at least one chronic health condition, and 22.6 percent (21,000) reported having two or more health conditions. One of four (25.8 percent; 25,000) veterans with mental health conditions lived in poverty.

“A large majority of veterans with mental health needs were disabled due to a physical or mental health condition.”
Compared to the nonveteran population, veterans had a significantly lower level of mental health need. Adjusting for age and gender differences between the two groups eliminated this gap, and the standardized mental health need estimates were 3.5 percent and 3.9 percent for veterans and nonveterans, respectively.

Majority of Veterans with Mental Health Needs Did Not Receive ‘Minimally Adequate Treatment’

Two of three veterans (68.8 percent; 62,000) with mental health needs reported they visited a health professional (e.g., primary care physician, counselor, social worker, etc.) “for problems related to [their] mental health, emotions, nerves, or [their] use of alcohol or drugs” within the past 12 months.

Mental health visits alone, however, do not suggest that a person in need received adequate treatment. To measure the concept of “unmet needs in relation to mental health treatment,” the authors used evidence-based guidelines to develop a measure indicating minimally adequate treatment (MAT). Minimally adequate treatment for individuals with serious mental illness was defined as “having four or more visits with a health professional in the past 12 months and use of prescription medication for mental health problems in the past 12 months.” Based on these criteria, we found that among veterans with mental health needs, approximately one in four (23.8 percent) received minimally adequate treatment, 45.8 percent received inadequate treatment, and nearly one-third (30.5 percent) did not receive any treatment during the 12 months prior to participating in CHIS (see Exhibit 4).

Compared to nonveterans, veterans with mental health needs were more likely to have received some treatment. However, a large majority — three out of four — or 76.3 percent of veterans with mental health needs did not receive minimally adequate treatment and therefore had unmet needs. Most of these veterans were age 45 or older (70.1 percent;
High Proportions of Reported Suicide Ideation and Attempt Among Veterans

One in 10 California veterans (10.1 percent; 200,000) reported having experienced serious thoughts of suicide compared to 8.9 percent (2,284,000) of nonveterans (see Exhibit 5). Consistent with evidence in the literature, the age- and gender-adjusted proportion among veterans who had experienced suicide ideation (9.1 percent; 200,000) was significantly higher than the percent reported by nonveterans (5.6 percent; 2,284,000). Furthermore, male veterans had greater percentages of suicide ideation at all ages compared to nonveteran men. Approximately 12.6 percent (43,000) of male veterans ages 18-44 reported having serious thoughts of suicide compared to 9.3 percent (626,000) of nonveteran men ages 18-44, and 7.4 percent (65,000) of male veterans age 65 years and older reported having serious thoughts of suicide compared to 3.8 percent (37,000) of nonveteran men within the same age group. Hispanic/Latino veterans who reported serious thoughts of suicide (24.8 percent; 48,000) were overrepresented relative to their representation in the overall veteran population (14.9 percent; 496,000).

Among veterans with suicidal thoughts, 25.8 percent (52,000) reported they had attempted to commit suicide at least once during their lifetime. The unadjusted percent of attempted suicide among adult nonveterans (33.8 percent; 773,000) was significantly higher, but after adjusting the estimates for sex and age, the proportions of veterans and nonveterans who reported having attempted suicide were

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*One in 10 California veterans reported having experienced serious thoughts of suicide.*
comparable (19.9 percent and 20.7 percent, respectively).

Importantly, veterans in California were significantly more likely to have had suicidal thoughts than nonveterans (9.1 percent versus 5.6 percent). Although the proportion of lifetime suicide attempts is similar to the proportion among nonveterans, veterans have greater access to firearms and weapons training and are more likely to complete suicide by firearms compared to nonveterans. While the CHIS data cannot estimate frequencies of completed suicide, evidence from the literature suggests that completed suicide among veterans is notably high. Veterans represented 22 percent of reported suicides in the United States in fiscal years 2009-2012, and a recent study concluded that the suicide rate among OIF/OEF veterans was up to 61 percent higher than the suicide rate among the general population.

Policy Implications and Recommendations

Treating veterans with mental illness requires considerable resources. While veterans with mental illness and substance use disorders represented 15 percent of the Veterans Health Administration (VHA) patient population in 2007, they accounted for one-third of all VHA service costs. Veterans served by VHA represent less than half of the veteran population, and as many as 67,000 veterans in California had unmet mental health needs between 2011 and 2013. Strategies that increase veterans’ access to mental health services and foster ongoing engagement are needed to meet the unique needs of this population. Below, the authors present recommendations to improve the mental health of veterans.

Increase access to mental health services.

Veterans with unmet mental health needs were more likely to live in poverty and had less education than all veterans in California. In turn, reduced access to mental health services due to costs and lack of education may contribute to unmet need among veterans. In an effort to promote access to care, the U.S. Department of Veterans Affairs launched the Veterans Choice program in November 2014, which allows VHA enrollees with a long wait or travel burdens to receive care from non-VA doctors. CHIS data suggest that veterans are more likely to receive some mental health treatment than nonveterans, but a comparable proportion of veterans and nonveterans received minimally adequate treatment. This suggests that veterans can potentially benefit from additional support and strategies to sustain their treatment.

Recommendations:

- Reduce patient cost sharing among veterans by lowering or eliminating copayments and deductibles for mental health services and prescription drugs.
- Enforce mental health parity legislation and requirements.
- Provide enabling services such as case management, transportation, outreach, and client education to increase service use and treatment adherence.
- Explore and develop innovative methods to keep veterans engaged in their mental health care.

Integrate physical and mental health services.

Two-thirds (68.8) of veterans in California with mental health needs reported seeing a health professional for mental health or substance use problems; only a quarter (26.6 percent) received minimally adequate treatment. In contrast, nearly nine out of 10 veterans (88.3 percent) had visited a doctor in the 12 months prior to participating in CHIS. The high proportion of veterans having contact with doctors presents an opportunity for health service providers to identify as well as treat veterans with mental health needs. By coordinating physical and behavioral health services, providers can help ensure that veterans receive adequate treatment for their conditions.
Recommendations:

• Standardize mental health screenings as part of physical examinations in all health care settings.

• Increase coordination of physical and behavioral health care through improved information sharing and collaborative referral processes among providers.

• Integrate physical, mental, and behavioral health services by co-locating services and/or developing strong partnerships that model patient-centered medical homes or the VA's Patient Aligned Care Team (PACT) model.

• Educate the families and friends of veterans about strategies for recognizing signs of emotional distress and providing support.

Reduce mental health stigma. A number of studies suggest that mental health stigma deters military service members from seeking treatment. Some service members perceive seeking mental health treatment as a sign of weakness and as being inconsistent with military values of individual strength and toughness. Other service members have reported that they fear treatment would have negative consequences for their careers or would impact their relationships with superiors and peers.

Mental health stigma can also negatively influence treatment adherence. Findings from a RAND Corporation report indicated that service members with mental health disorders reported higher levels of mental health stigma compared to service members without mental health disorders. Similarly, service members in treatment reported higher levels of stigma related to mental health treatment than those not in treatment. As a result of this stigma, service members and veterans potentially leave treatment early.

Recommendations:

• Support campaigns that reduce mental health stigma in the military.

• Increase the number of mental health providers who are adept at working with veterans and understand military culture and values.

• Integrate family members and friends into the mental health care of veterans.

• Promote community outreach to educate veterans and their families about mental health and substance use disorders through homeless shelters and veterans’ organizations.

Support long-term suicide prevention efforts. Veterans in California are more likely to experience serious thoughts of suicide than nonveterans. Younger male veterans who served in the Gulf War and OIF/OEF were more likely to report having serious thoughts of suicide than nonveteran men in the same age group. Lifetime suicide ideation was also more prevalent among older male veterans compared to older nonveteran men. These findings highlight an urgent need to support those who recently served in Iraq and Afghanistan and to provide ongoing risk assessment and lifetime assistance to all veterans.

Recommendations:

• Promote early identification of mental health conditions and implement standardized delivery of evidence-based therapies that are effective for veterans.

• Develop systems for continuously monitoring the mental health of veterans, as mental health consequences of military service, if any, may surface later in life.

• Enhance continuity of care across health service providers and payers that track veterans’ medical and service histories as they age.

• Address economic stressors such as unemployment and poverty that can exacerbate psychological distress and increase risk for suicide.
Some veterans may experience PTSD symptoms later in life.

Evaluate mental health status throughout the life course. These findings demonstrate the need for a long-term and continuous approach for identifying and adequately meeting the mental health needs of veterans. Some veterans may experience PTSD symptoms later in life. Veterans who achieved success after their military service may also experience late-onset stress symptomatology decades after their service has ended. As veterans reflect on their life experiences, memories of military service and combat may trigger stress and symptoms similar to PTSD. Therefore, veterans who do not show any indication of psychological distress upon completion of their service may still experience stress and need support later in life. Continuous mental health evaluation throughout the life course for veterans is highly recommended.

Methodology
Data from CHIS 2011-2013 were pooled to obtain reliable average estimates of mental health need and unmet need within the veteran population. The numbers and percentages reported in this policy brief are based on the annual average over the 2011 to 2013 time period. Veterans were defined as respondents who had served in the U.S. Armed Forces for at least a year, and all CHIS responses completed by proxy were excluded. The large sample size (N=6,952) allowed detection of mental health-related factors with respect to period of service, age, and other demographic characteristics. Because age and gender are important factors influencing mental health, all comparisons between veterans and nonveterans were standardized to the age and gender distribution of veterans in the sample. This approach is similar to the approach used by SAMSHA when comparing levels of distress between veterans and nonveterans. The Kessler 6 is a series of six survey questions designed to estimate the proportion of adults with serious mental illness within a population. Following nationally recognized guidelines, a score of 13 and above was used to identify adults with serious psychological distress. Individuals with “mental health need” were defined as those with serious psychological distress and at least a moderate level of impairment in one or more life domains (e.g., chores, work, or social life). Among those with mental health needs, individuals who had four or more visits with a health professional in the past 12 months and used prescription medication for mental health problems in the past 12 months were defined as having received minimally adequate treatment. People with mental health needs who did not meet these service thresholds were considered to have “unmet needs.” Statistically significant differences between veterans and nonveterans were tested using a test of proportions and evaluated at $p < .05$, unless otherwise stated.

Limitations
CHIS is a cross-sectional survey that cannot be used to establish temporality and, therefore, causality. In other words, indications of mental health need or psychological distress among veterans cannot be assumed to have developed during or after their military service. Military recruits, however, undergo physical and mental health evaluations prior to their service, which reduces the likelihood that veterans with mental health needs had these needs before active duty. In addition, CHIS only interviews respondents in residential settings, which do not include homeless individuals and people living in group quarters such as group homes, dormitories, jails, and prisons. The U.S. Department of Housing and Urban Development estimated that in January of 2014, 12,096 veterans experienced homelessness in California, half of whom potentially had mental health issues. If veterans not represented in CHIS are more likely to have mental health challenges than veterans represented in CHIS, estimates of mental health need among veterans were likely underestimated. CHIS also cannot differentiate between veterans who receive care from VHA and veterans who obtain care from other providers. Therefore, any differences between these two groups cannot be examined. Finally, female veterans, who represent more than 2 million U.S. veterans, are not highlighted in this policy brief due to the small sample size. As the number of female veterans in CHIS increases, it is important to examine and address the mental health needs of this population in future analyses.

Author Information
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Suggested Citation

Endnotes
5 The war in Iraq was renamed Operation New Dawn as of September 2010, but it will be referred to as Operation Iraqi Freedom (OIF) throughout this policy brief.
6 Mental Health Services Act, in Title 9, Div.1, Chapter 14, Section 3200.105- 36502004: California.
8 Given the gender composition of veterans in the CHIS sample, findings reported in this policy brief generally describe the mental health needs of male veterans.
9 Age compositions were similar to estimates reported by the National Center for Veterans Analysis and Statistics.
10 Peacetime periods were defined as service dates that fell within periods of war dates listed by the Congressional Service Report U.S. Periods of War and Dates of Recent Conflicts. http://fas.org/sgp/crs/natsec/RS21403.pdf.
11 Chronic health conditions included asthma, diabetes, high blood pressure, and any kind of heart disease.
12 A test of proportions was conducted to examine whether estimates were equal.
21 For more information about the Veterans Choice program, visit http://www.va.gov/opavetchoice/.
22 For more information about Patient Aligned Care Teams, visit http://www.va.gov/health/services/primarycare/.