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## POOR ACCESS TO CARE AMONG INDIVIDUALS WITH LOW QUALITY OF LIFE

### INTRODUCTION

Health-related quality of life (HRQOL) is an important measure of well-being that includes both social and individual determinants of health (Moriarty et al. 2003). Barriers to accessing health care can dramatically reduce HRQOL. For example, people who lack medical insurance are more likely to skip routine care, putting themselves at greater risk for disabling health conditions, compared with people who are insured.<sup>1</sup> But even those who are insured face barriers to care: long wait times, complex telephone “trees” before reaching an operator, and an inability to get an appointment when needed, among others. Such hurdles can lead to nonurgent visits to the emergency department, which strain the health care system (D’Avolio et al. 2008).

This issue brief describes the HRQOL of individuals included in the Health Care Survey of Department of Defense Beneficiaries (HCSDB)—specifically, the survey administered in the third quarter (Q3) of 2018. The HCSDB’s HRQOL measures were drawn from the Centers for Disease Control and Prevention’s (CDC’s) HRQOL-4 scale, which asks individuals to rate their general health and report the number of days in the past month that they had poor physical health, poor mental health, and functional impairment.<sup>2</sup> The CDC HRQOL-4 is an effective tool for identifying unmet health needs, health disparities, and the symptom burden of disease and disability (Moriarty et al. 2003). Moreover, the scale has been incorporated into a number of national and state-level surveys, such as the Behavioral Risk Factor Surveillance System (BRFSS) survey, which allows for comparisons to be made between HCSDB beneficiaries and populations assessed using these other surveys.

This brief assesses the health related quality of life (HRQOL) for military beneficiaries among different demographic subpopulations. It also examines the relationship between HRQOL and access to care.

In the current brief, we examine the level of agreement between individual measures of HRQOL across different demographic subpopulations. We also examine the relationship between HRQOL and access to care. Since older adults tend to have different health care needs than younger adults, we restricted our analysis to 9,975 beneficiaries under age 65 who were covered by TRICARE Prime, Standard/Extra (known as Select as of January 1, 2018), Reserve Select, or Retired Reserve insurance. Response rates were high for all HRQOL questions (with less than 4 percent of beneficiaries having a missing or out of range response to any question) and for access to care questions (with less than 1 percent having a missing response about care that they needed). To maximize the information available for the analysis, we did not restrict the population to exclude beneficiaries who did not seek out all types of care, or who did not answer every HRQOL question; instead, we allowed our sample sizes to vary across analyses.

### HRQOL MEASURES

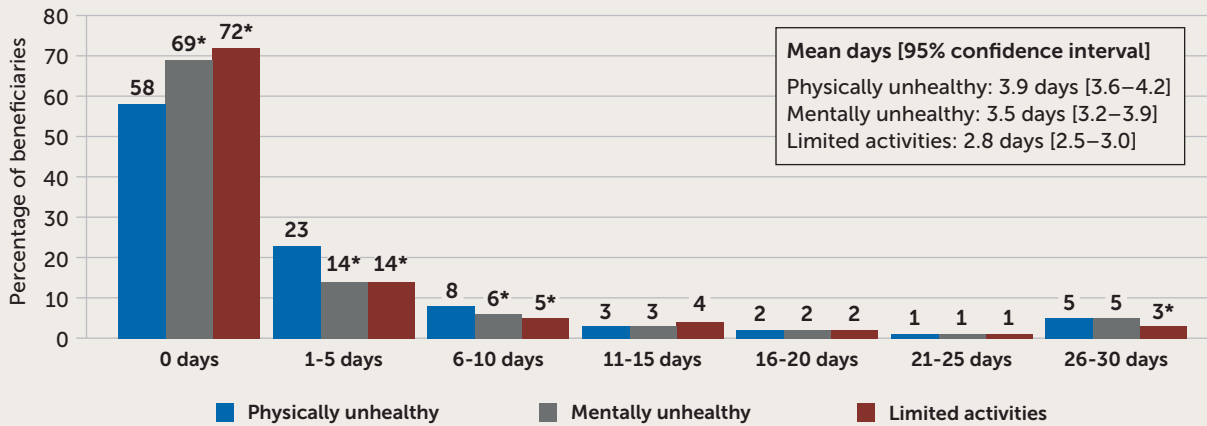
To assess beneficiaries’ HRQOL, we used the following four questions from the HCSDB, which asked beneficiaries to report:

1. **General health:** Rating on a scale from excellent to poor health, which we dichotomized as excellent, very good, or good versus fair or poor.
2. **Physically unhealthy:** Number of days in the past month that physical health (including physical illness and injury) was not good.
3. **Mentally unhealthy:** Number of days in the past month that mental health (including stress, depression, and problems with emotions) was not good.
4. **Limited in usual activities:** Number of days in the past month that poor physical or mental health kept them from doing usual activities (such as self-care, work, or recreation).

Figure 1 shows the distributions of the number of physically unhealthy days, mentally unhealthy days, and days of limited activity. Based on an analysis of all beneficiaries with HRQOL assessed (including those reporting 0 unhealthy days), the average numbers of physically unhealthy days (3.9) and mentally unhealthy days (3.5) were similar, and both were

significantly higher than the average number of limited-activity days (2.8). However, the proportion of beneficiaries with at least one physically unhealthy day in the past month (42 percent) was significantly higher than the proportion with at least one mentally unhealthy day (31 percent) and the proportion with at least one limited-activity day (28 percent).

### Frequency of poor health and limited-activity days, by type of day



\*Statistically significant difference compared with the prevalence of physically unhealthy days ( $p < 0.05$ )

**Figure 1**

To ensure that the number of unhealthy or limited-activity days reflect issues with general health, as opposed to a recent injury or emotional episode, we calculated the mean of these measures by beneficiaries' general health rating. Compared to those reporting good, very good, or excellent general health, beneficiaries who reported that their general health was fair or poor had a significantly higher average number of physically unhealthy (13.6 vs. 2.9), mentally unhealthy (10.9 vs. 2.7), and limited-activity (9.4 vs. 2.0) days.

The vast majority (89 percent) of HCSDB military personnel (that is, active duty personnel, reservists, and retirees under age 65) reported having good, very good, or excellent general health. The proportion with a positive general health rating was 6 to 10 percentage points higher among HCSDB military personnel than among military populations studied in the literature. One explanation is that veterans in the literature included people ages 65 and older, who may not have comparable HRQOL to the younger population we analyzed. Despite reporting better general health, HCSDB military personnel averaged similar numbers of physically unhealthy, mentally unhealthy, and limited-activity days as self-identified veterans, based on the BRFSS (Table 1). HCSDB military women averaged significantly more physically unhealthy, mentally unhealthy, and

limited-activity days than military men. Differences by race or ethnicity were not significant.

Compared to HCSDB military personnel, HCSDB family members averaged significantly fewer physically unhealthy days, but had a similar number of mentally unhealthy and limited-activity days, and a similar proportion reporting that their general health was good, very good, or excellent. The proportion reporting good, very good, or excellent general health was 5 to 17 percentage points higher among HCSDB family members than among civilian populations studied in the literature (with the difference being greatest among Latino individuals). Despite reporting better general health, the average numbers of physically unhealthy, mentally unhealthy, and limited-activity days reported by HCSDB family members of military personnel were in line with averages reported in the literature for civilians who responded to the BRFSS (Table 1). There were no significant differences between men and women, nor by race or ethnicity, in the average number of physically unhealthy, mentally unhealthy, and limited-activity days.

Using CDC's (2000) methodology, we calculated an additional HRQOL measure—physically or mentally unhealthy days—that sums physically and mentally unhealthy days and caps the sum at 30

**on page 1**

<sup>1</sup> See <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Access-to-Health-Services>.

<sup>2</sup> For details on the CDC HRQOL-4 scale, see [https://www.cdc.gov/hrqol/hrqol14\\_measure.htm](https://www.cdc.gov/hrqol/hrqol14_measure.htm).

days (which may overestimate the overall number of unhealthy days, because summing assumes no overlap in physically and mentally unhealthy days). We then categorized this summary measure, along with the three core measures, to examine prevalence of frequent distress and limitations in usual activities, defined as 14 or more unhealthy or limited-activity days in the past month, respectively. The prevalence

rates [with 95 percent confidence interval] were: 10.2 percent [9.1–11.3 percent] with frequent physical distress, 10.6 percent [9.3–11.9 percent] with frequent mental distress, 8.3 percent [7.1–9.4 percent] with frequent activity limitations, and 19.0 percent [17.5–20.6 percent] with frequent physical or mental distress.

### HRQOL in HCSDB (military personnel and their family members) versus other reported military and civilian groups

Study, subpopulation	Proportion with good, very good, or excellent general health	Mean days [95% confidence interval]		
		Physically unhealthy	Mentally unhealthy	Limited activities
<b>MILITARY POPULATIONS</b>				
<b>HCSDB military personnel (2018)<sup>a</sup></b>				
Overall (age < 65)	89%	4.2 [3.8–4.6]	3.4 [3.0–3.8]	2.9 [2.6–3.2]
Men	89%	3.9 [3.5–4.3]	2.8 [2.5–3.2]	2.6 [2.3–2.9]
Women	90%	5.0 [4.1–6.0]	5.2 [3.9–6.4]	3.7 [2.9–4.5]
Non-Latino white	91%	3.9 [3.4–4.4]	2.9 [2.4–3.4]	2.6 [2.2–3.0]
Non-Latino black	87%	4.8 [3.7–6.0]	4.6 [2.8–6.4]	3.1 [2.3–3.9]
Latino	89%	4.2 [3.2–5.2]	4.0 [3.0–5.0]	3.2 [2.3–4.0]
<b>Katon et al. (2015)<sup>b</sup></b>				
Men	80%	4.7	2.8	Not reported
Women	84%	5.1	5.7	Not reported
<b>Luncheon and Zack (2012)<sup>c</sup></b>				
Non-Latino white	81%	4.2	2.6	2.5
Non-Latino black	79%	4.4	3.3	2.9
Latino	80%	4.2	3.0	2.6
<b>CIVILIAN POPULATIONS</b>				
<b>HCSDB family members (2018)<sup>d</sup></b>				
Overall (age < 65)	91%	3.6 [3.1–4.0]	3.6 [3.0–4.2]	2.6 [2.2–3.0]
Men	93%	2.8 [1.7–3.9]	3.7 [0.7–6.7]	2.8 [0.8–4.8]
Women	91%	3.6 [3.2–4.1]	3.6 [3.1–4.2]	2.6 [2.2–3.0]
Non-Latino white	92%	3.6 [3.2–4.1]	3.9 [3.2–4.5]	2.5 [2.1–2.9]
Non-Latino black	88%	2.2 [0.9–3.5]	4.4 [0.7–8.1]	2.8 [0.0–5.6]
Latino	91%	3.6 [3.2–5.2]	3.4 [2.3–4.6]	2.5 [1.6–3.4]
<b>Katon et al. (2015)<sup>b</sup></b>				
Men	85%	3.2	3.0	Not reported
Women	84%	4.0	4.0	Not reported
<b>Luncheon and Zack (2012)<sup>c</sup></b>				
Non-Latino white	87%	3.4	3.4	2.1
Non-Latino black	79%	3.9	4.0	2.6
Latino	74%	3.6	3.6	2.1

<sup>a</sup>Based on 2018 Q3 estimates for about 6,600 active duty personnel, reservists, and retirees who are under age 65 and covered by TRICARE insurance; sample sizes varied somewhat by measure.

<sup>b</sup>Based on 2011–2012 BRFSS estimates from 13,321 adult military veterans and 88,295 civilians.

<sup>c</sup>Based on unadjusted 2007–2009 BRFSS estimates from 110,365 adult military veterans and 691,497 civilians.

<sup>d</sup>Based on 2018 Q3 estimates for about 3,000 family members of active duty personnel, reservists, and retirees who are under age 65 and covered by TRICARE insurance; sample sizes varied somewhat by measure.

**Table 1**

## DEMOGRAPHIC CHARACTERISTICS

Table 2 shows the distribution of demographic characteristics for HCSDB beneficiaries with and without frequent physical or mental distress. Relative to those without frequent distress, a much greater proportion of beneficiaries

with frequent distress were female, married, and had lower educational attainment (some college or a two-year degree versus some graduate school or more). No other demographics differed significantly by the presence or absence of frequent distress, and in both groups, most beneficiaries had Prime insurance.

### Demographic characteristics, by frequency of distress

Characteristic	Frequent physical or mental distress?	
	Yes (n = 1,786)	No (n = 7,843)
<b>GENDER*</b>		
Men	<b>42%</b>	<b>49%</b>
Women	<b>58%</b>	<b>51%</b>
<b>AGE CATEGORY</b>		
18–24	20%	21%
25–34	24%	24%
35–44	18%	18%
45–54	15%	13%
55–64	24%	25%
Mean (years)	39.9	39.9
<b>RACE AND ETHNICITY</b>		
Latino	13%	13%
Non-Latino white	59%	63%
Non-Latino black	13%	10%
Non-Latino Asian	6%	6%
Non-Latino multiracial	3%	4%
Other/unknown	6%	4%
<b>MARITAL STATUS*</b>		
Never married	15%	17%
Married	<b>47%</b>	<b>43%</b>
Divorced/annulled/separated/widowed	6%	4%
Unknown	32%	36%
<b>EDUCATIONAL ATTAINMENT*</b>		
High school graduate/GED/less	18%	18%
Some college/two-year degree	<b>45%</b>	<b>38%</b>
Four-year college graduate	18%	21%
Some graduate school/more	19%	23%

Characteristic	Frequent physical or mental distress?	
	Yes (n = 1,786)	No (n = 7,843)
<b>BENEFICIARY TYPE</b>		
Active duty/active reservist	37%	34%
Inactive reservist, family of active duty/reservist	25%	23%
Retired (age < 65) or dependent of retired	42%	43%
<b>INSURANCE TYPE</b>		
Prime insurance	80%	74%
Non-Prime insurance	20%	26%

Note: Frequency of distress (which was missing for 346 beneficiaries in the analysis population) is based on the number of physically or mentally unhealthy days in the past month, dichotomized as Yes ( $\geq 14$  days) or No (0–13 days). Percentages may not sum to 100 because of rounding. Bolding denotes a difference of 5 percent or more for characteristics that differ significantly by presence or absence of frequent distress.

\*Statistically significant difference in the distribution between those with and without frequent distress ( $p < 0.05$ ).

**Table 2**

## DIFFERENCES IN ACCESS TO CARE, BY HRQOL MEASURES

The 2018 Q3 HCSDB asked beneficiaries about access to four types of care in the last year:

1. **General care:** How often was it easy to get the care, tests, or treatment you needed?
2. **Routine care:** How often did you get an appointment for a check-up or routine care at a doctor’s office or clinic as soon as you needed?
3. **Specialist care:** How often did you get an appointment to see a specialist as soon as you needed?
4. **Urgently needed care:** When you needed care right away, how often did you get care as soon as you needed?

The response choices for each question were never, sometimes, usually, and always, and we dichotomized the responses as never/sometimes and usually/always. Among people who reported needing a given type of care in the last 12 months, we determined the prevalence of these two categories separately by frequency of physical distress, mental distress, and limited activities, defined as: frequent (14 or more days), some (1 to 13 days), or no (0 days) distress or limitations. We also calculated the mean number of days with distress and limited activities for beneficiaries who usually/always versus never/sometimes had access to care.

Below, we summarize the results for each of the four categories of care assessed. The vast majority of beneficiaries in the analysis population reported getting general care or routine care over the last 12 months, whereas only about half of beneficiaries reported seeking specialty care or urgently needed care.

## GENERAL CARE

Approximately 84 percent of beneficiaries in the analysis population reported needing some care, tests, or treatment in the last 12 months.

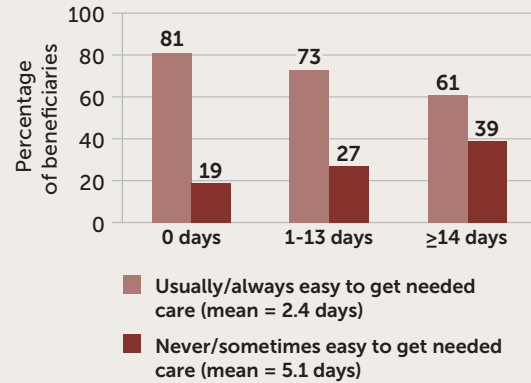
Figure 2 summarizes these individuals' ease of getting needed care, tests, and treatment by their frequency of physical distress, mental distress, or limitations.

### Easy access to care, by frequency of distress or limitation

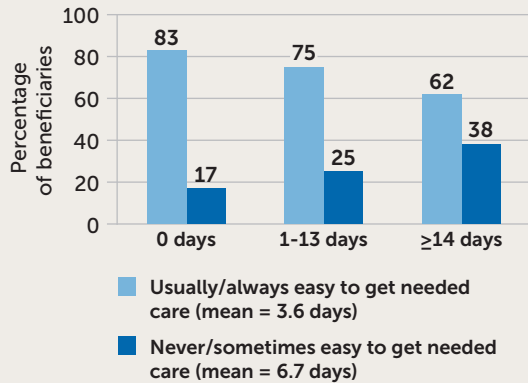
#### Findings

- Overall, 78 percent of beneficiaries reported usually or always having easy access to care (results not shown).
- Easy access to care was more common among beneficiaries with 0 physically unhealthy, mentally unhealthy, or limited-activity days than among those with 14 or more such days.
- Compared with beneficiaries who had easy access to care, those who did not averaged 2.7 to 3.1 more unhealthy or limited-activity days.

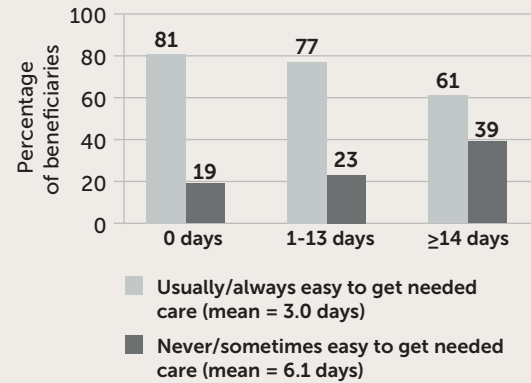
Easy access to care by number of limited-activity days



Easy access to care by number of physically unhealthy days



Easy access to care by number of mentally unhealthy days



Note: The proportion of beneficiaries with easy access to needed care differed significantly by frequency of physically unhealthy, mentally unhealthy, and limited-activity days ( $p < 0.05$ ).

Figure 2

## ROUTINE CARE

Approximately 83 percent of beneficiaries in the analysis population reported getting routine

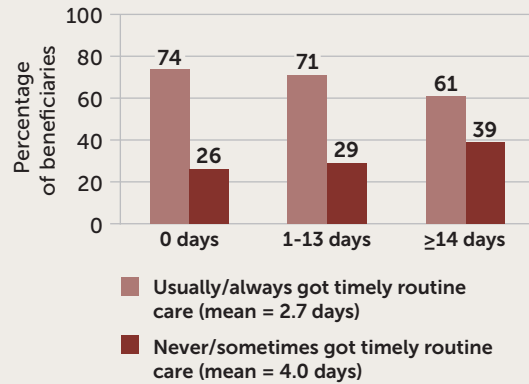
care in the last 12 months. Figure 3 summarizes these individuals' ability to get timely routine care by their frequency of physical distress, mental distress, or limitations.

### Timely routine care, by frequency of distress or limitations

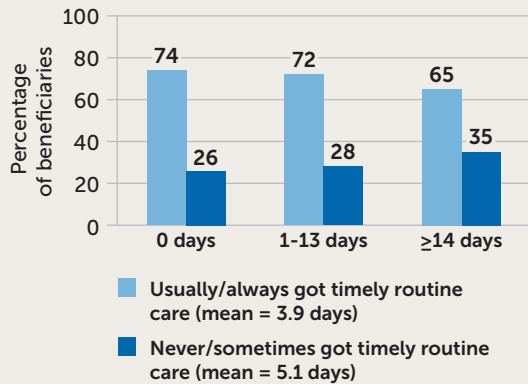
#### Findings

- Overall, 72 percent of beneficiaries reported usually or always getting timely routine care (results not shown).
- Timely routine care was more common among beneficiaries with 0 physically unhealthy, mentally unhealthy, or limited-activity days than among those with 14 or more such days.
- Compared with beneficiaries who got timely routine care, those who did not averaged 1.2 to 2.2 more unhealthy or limited-activity days.

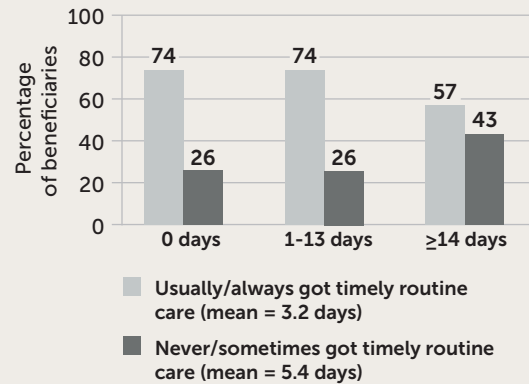
Timely routine care by number of limited-activity days



Timely routine care by number of physically unhealthy days



Timely routine care by number of mentally unhealthy days



Note: The proportion of beneficiaries with timely access to routine care differed significantly by frequency of physically unhealthy, mentally unhealthy, and limited-activity days ( $p < 0.05$ ).

Figure 3

## SPECIALIST CARE

Approximately 55 percent of beneficiaries in the analysis population reported getting care

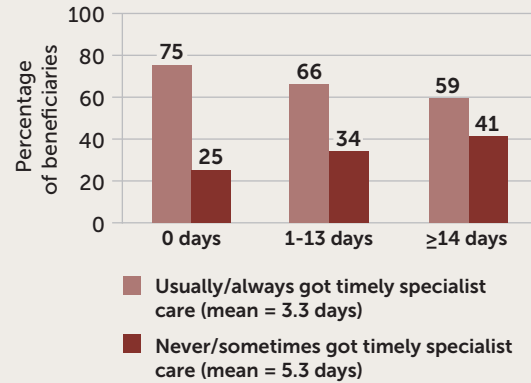
from a specialist in the last 12 months. Figure 4 summarizes these individuals' ability to get timely specialist care by their frequency of physical distress, mental distress, or limitations.

### Timely specialist care, by frequency of distress or limitations

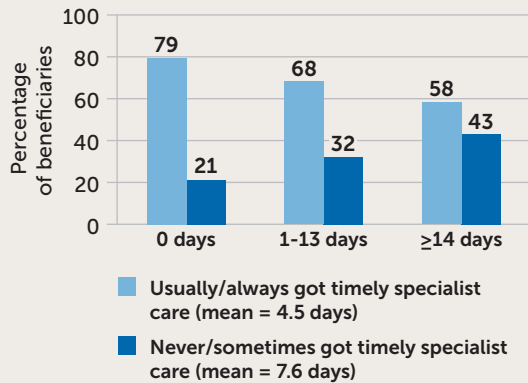
#### Findings

- Overall, 72 percent of beneficiaries reported usually or always getting timely specialist care (results not shown).
- Timely specialist care was more common among beneficiaries with 0 physically unhealthy, mentally unhealthy, or limited-activity days than among those with 14 or more such days.
- Compared with beneficiaries who got timely specialist care, those who did not averaged 2.0 to 3.1 more unhealthy or limited-activity days.

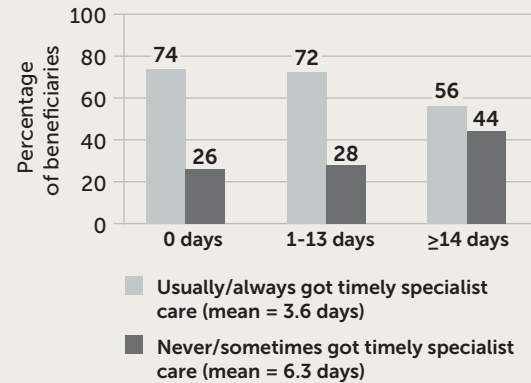
Timely specialist care by limited-activity days



Timely specialist care by physically unhealthy days



Timely specialist care by mentally unhealthy days



Note: The proportion of beneficiaries with timely access to specialist care differed significantly by frequency of physically unhealthy, mentally unhealthy, and limited-activity days ( $p < 0.05$ ).

**Figure 4**



## URGENTLY NEEDED CARE

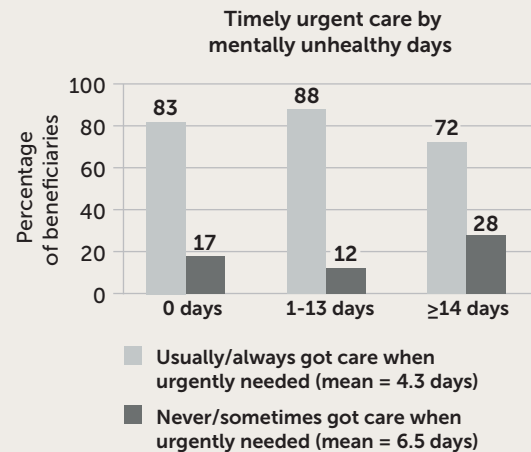
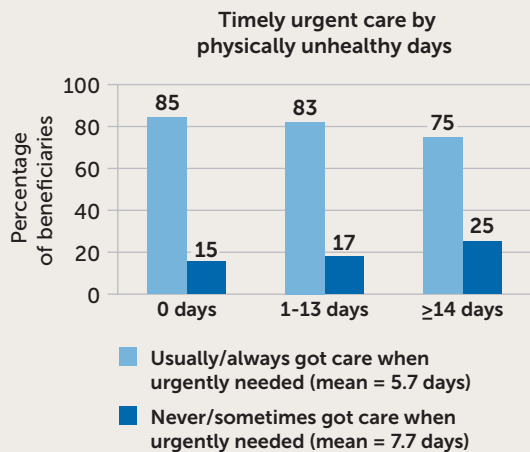
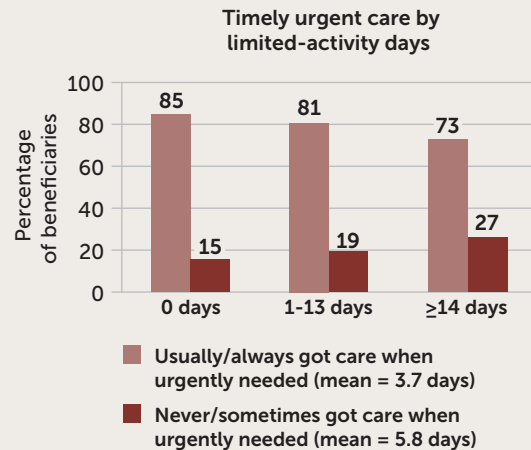
Approximately 44 percent of beneficiaries in the analysis population reported urgently

needing care in the last 12 months. Figure 5 summarizes these individuals' ability to get care when urgently needed by their frequency of physical distress, mental distress, or limitations.

### Urgently needed care, by frequency of distress or limitations

#### Findings

- Overall, 82 percent of beneficiaries reported usually or always getting timely urgent or emergent care (results not shown).
- Timely urgent care was more common among beneficiaries with 0 physically unhealthy, mentally unhealthy, or limited-activity days than among those with 14 or more such days.
- Compared with beneficiaries who got timely urgent care, those who did not averaged 2.0 to 2.2 more unhealthy or limited-activity days.



Note: The proportion of beneficiaries with timely access to urgent care differed significantly by frequency of physically unhealthy, mentally unhealthy, and limited-activity days ( $p < 0.05$ ).

Figure 5

## CONCLUSIONS

HCSDB beneficiaries reported levels of distress in physical health, mental health, and functioning that were in line with estimates from the CDC and previous studies of military and civilian populations. These measures also lined up with self-assessed general health, in that beneficiaries with lower general health ratings averaged greater numbers of unhealthy and limited-activity days. Rates of frequent physical distress and frequent mental distress were similar to one another; among

beneficiaries with less frequent distress, physically unhealthy days were more common than mentally unhealthy days. Both physically and mentally unhealthy days were more frequent than limited-activity days, which is unsurprising, given that beneficiaries could have had persistent poor health but at low levels that did not restrict their activities.

A recent article by Shockey et al. (2017) examined the prevalence of frequent distress among U.S. workers in different occupations. Workers with some of the highest levels of frequent distress were

those working in “protective services” (which does not include active military personnel but may include veterans).<sup>3</sup> Compared with U.S. protective-service workers, HCSDB beneficiaries (including military personnel and their family members) had similar rates of frequent physical distress (10.2 vs. 9.3 percent) and mental distress (10.6 vs. 9.2 percent), but a significantly higher rate of frequent activity limitations (8.3 vs. 4.8 percent).

Differences in physical versus mental health varied by the gender of HCSDB beneficiaries, particularly among military personnel. Military men reported more days with poor physical health than with poor mental health. Military women had a similar number of physically and mentally unhealthy days, on average, and the average number of unhealthy days and limited-activity days was significantly higher among military women than military men.

HRQOL also varied by ease of access to care. Greater levels of distress and limitations were reported among beneficiaries who said they had difficulty accessing general, routine, specialist, and urgent care. In the current HCSDB, it’s not possible to determine whether there is a causal link. That is, we cannot say if poor health leads to access problems—because unhealthy people may be more likely to need frequent medical visits—or if difficulties accessing needed care lead to poor health. It’s also possible that there is no causal link, and that external factors explain the association between HRQOL and access to care. One example of an external factor is insurance coverage, but given that most HCSDB beneficiaries with and without frequent distress had Prime insurance, this was probably not a factor (Table 1). Another example is socioeconomic status, which could have had an effect on both HRQOL and access to care; in a study of adults ages 65 and older, Segev et al. (2012) found that frequent mental distress was higher among people with cost barriers than among those without (20 percent versus 6 percent, respectively).<sup>4</sup>

Although most HCSDB beneficiaries reported usually or always having easy or timely access to care, it remains concerning that around 40 percent of the most vulnerable HCSDB beneficiaries—those with frequent distress and frequent activity limitations—reported problems getting the care they needed. Ensuring better access to care may improve beneficiaries’ health, ease the burden on emergency departments, and lower health care costs.

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## SOURCE

“Q3 FY2018 Health Care Survey of Department of Defense Beneficiaries.” N = 11,840. The response rate was 11.8 percent. The survey was fielded from March 1 to May 18, 2018.

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<sup>3</sup> For a list of occupations included under protective services, see: <https://www.bls.gov/oes/current/oes330000.htm>.

<sup>4</sup> A “cost barrier” was defined as an individual not being able to see a doctor at least once in the past 12 months because of the cost; the presence of a cost barrier was assessed using the BRFSS survey.

