



U.S. Department of Defense

Factor Rating Interpretation Guide Safe Storage for Lethal Means

What is Safe Storage for Lethal Means?

Safe Storage for Lethal Means measures how often one keeps objects that can be used to hurt themselves or others, such as firearms and medication, safely stored in their living space.¹

The following item is used to assess *Safe Storage for Lethal Means* on the DEOCS using a five-point response scale from *Never* to *Always*:

- In general, the hazards in my living space that may be deliberately or accidentally used to harm others or myself, such as poisons, medications, and firearms, are safely stored (for example, locked in a cabinet, unloaded).

Why is it important?

Research shows that access to lethal means places individuals at higher risk for suicide.¹ For example, data has shown that risk of suicide is 5 to 6 times greater in households with firearms.^{2,3} In a review exploring suicide risk, Stanley and colleagues⁴ theorized that one reason first responders—and police officers, specifically—may be at higher risk for suicide is because of their increased access to lethal means, such as firearms. Service members may also be at increased risk in part due to easy access to firearms. While about 50% of all suicide deaths in the U.S. are by firearm⁵, this percentage is greater in the Military, with 64% of suicide deaths in the Military by firearm.⁶

Accordingly, safe storage of firearms can reduce the risk of suicide and accidental death that are associated with owning a firearm.^{7,8,9,10} While some individuals have longer durations of suicidal crisis, many suicide attempts are impulsive;^{11,12} therefore, limiting access to lethal means and putting time and space between suicidal impulses and lethal means is an effective way of preventing suicide.^{13,14}

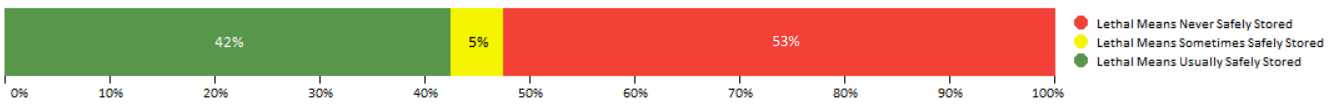
For more information on how to review your DEOCS results with these key outcomes in mind, please see the “Strategic Target Outcome Guide” in the Quick Links menu of the DEOCS dashboard.

How do I read my factor ratings?

The DEOCS dashboard displays results for *Safe Storage for Lethal Means* in a stacked bar graph showing ratings for **Lethal Means Never Safely Stored**, **Lethal Means Sometimes Safely Stored**, and **Lethal Means Usually Safely Stored**. Because *Safe Storage for Lethal Means* is a factor measured by a single question, you should interpret results as “X% of participants.” An example is shown below:

Safe Storage for Lethal Means

Safe storage for lethal means measures how often one keeps objects that can be used to hurt themselves or others, such as firearms and medication, safely stored in their living space. Keeping lethal means safely stored is linked to a lower likelihood of suicide.



Favorable rating: 42% of participants reported their lethal means are **usually safely stored**.

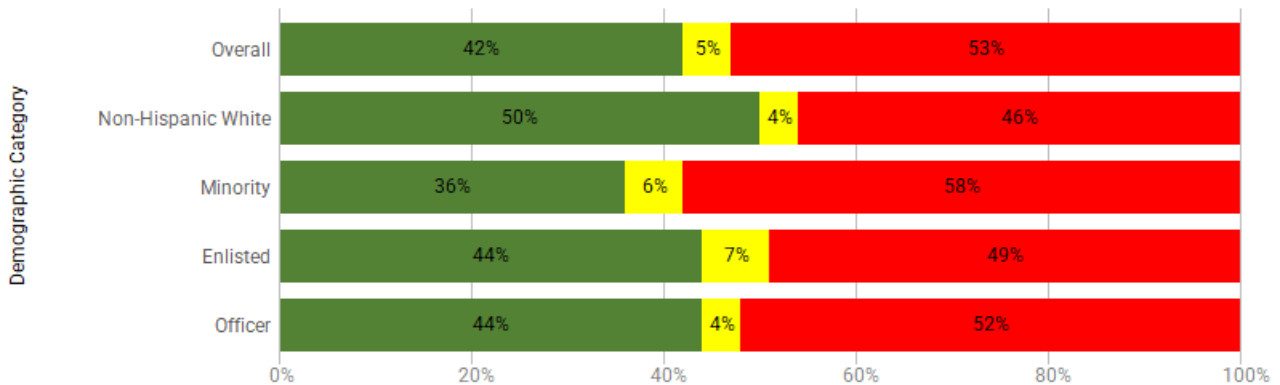
Middle rating: 5% of participants reported their lethal means are **sometimes safely stored**.

Unfavorable rating: 53% of participants reported their lethal means are **never safely stored**.

For the graph showing results by demographic categories, the percentages represent the percentage of participants from each demographic category who reported favorable, midpoint, or unfavorable responses.

Safe Storage for Lethal Means Ratings by Demographic Category

This graph displays Safe Storage for Lethal Means ratings by demographic category. No data are displayed if fewer than five people from a demographic category responded to this set of questions.



The first bar will always show the overall results and will be the same percentages that are shown in the stacked bar graph. The next bars will represent various demographic categories for your organization. These results can help determine whether some groups of people in your organization have particularly high or low perceptions of climate factors. In addition, you may have different categories than in the example above. If your organization did not have any participants from a particular demographic category or had fewer than five participants from a particular category, you would not see those categories in your graph. For more information on how the demographic groups are created, please see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

In this example, the favorable ratings (marked in green) can be interpreted as:

- 50% of non-Hispanic White participants reported their lethal means are usually safely stored, while 36% of minority participants reported their lethal means are usually safely stored.

stored;

- 44% of enlisted participants reported their lethal means are usually safely stored and 44% of officers reported their lethal means are usually safely stored.


The middle ratings (marked in yellow) can be interpreted as:


- 4% of non-Hispanic White participants reported their lethal means are sometimes safely stored, while 6% of minority participants reported their lethal means are sometimes safely stored;
- 7% of enlisted participants reported their lethal means are sometimes safely stored and 4% of officers reported their lethal means are sometimes safely stored.

The unfavorable ratings (marked in red) can be interpreted as:

- 46% of non-Hispanic White participants reported their lethal means are never safely stored, while 58% of minority participants reported their lethal means are never safely stored;
- 49% of enlisted participants reported their lethal means are never safely stored and 52% of officers reported their lethal means are never safely stored.

You may also see trends over time for your *Safe Storage for Lethal Means* favorable rating if there are previous 5.0 surveys with the same unit identification code (UIC) and the same commander/leader.

When applicable, trends over time are available in the dashboard by clicking on this icon: . They also appear in the PDF reports as a table. Even if your report includes trends over time, the results may not be comparable in certain circumstances. It is important to understand differences in roster size and roster composition at different time points as these items may impact comparability of trend results. Take a close look at the number of participants registered, surveys returned, and the response rate for any surveys for which trends are available to report; use caution when comparing trends over time if there are big differences in these numbers between surveys. Other things, such as deployments or changes in policy, may also make trends less comparable. For more information on factor rating trends, please see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

Finally, you may see an alert  for your *Safe Storage for Lethal Means* ratings. This means that your unit’s/organization’s favorable rating for *Safe Storage for Lethal Means* is **very low** compared to the other favorable ratings for this factor in your Service component. When applicable, this alert icon appears in the dashboard inside the “Protective Factors – Favorable Ratings” heading; click on the icon to see if *Safe Storage for Lethal Means* is listed in the table. The alert icon may also appear in the *Safe Storage for Lethal Means* section of the PDF reports. To identify whether your *Safe Storage for Lethal Means* ratings receive an alert, cut-off scores were created by rank-ordering all favorable ratings for this factor within a Service component. If your favorable rating for *Safe Storage for Lethal Means* is below your Service component’s cut-off score, this icon will appear in your report. There are unique cut-off scores for each factor within each Service component. Because of this, you may notice that some of the factors for which you have an alert have very different ratings. For more information on how these alerts are created, please see the “Data Overview” in the Quick Links menu of the DEOCS dashboard.

How are my unit's/organization's ratings created?

Safe Storage for Lethal Means ratings are created using the responses to a single question from a five-point *Never* to *Always* scale, as shown in the example below.

Safe Storage for Lethal Means Question	Never	Rarely	Sometimes	Often	Always	Total
In general, the hazards in my living space that may be deliberately or accidentally used to harm others or myself, such as poisons, medications, and firearms, are safely stored (for example, locked in a cabinet, unloaded).	53% (57)	2% (2)	3% (3)	13% (14)	29% (31)	100% (107)
	Never Safely Stored	Sometimes Safely Stored		Usually Safely Stored		Total responses 107
	57 / 107 = 53%	(2+3) / 107 = 5%		(14+31) / 107 = 42%		

The table above displays the percentage of responses (and number of responses in parentheses) for the *Safe Storage for Lethal Means* question across the five response options (*Never*, *Rarely*, *Sometimes*, *Often*, and *Always*). For example, five participants selected *Rarely* and *Sometimes*; this represents 5% of participants that responded to this question ($5 / 107 = .047$ or 5%).



Note that percentages are calculated out of the total number of participants responding to that question and not the total number of participants taking the survey. Participants can skip questions, so you may notice that total responses to questions vary. In addition, factor ratings may not always add to 100% due to rounding.

- The **unfavorable** rating, named **Lethal Means Never Safely Stored**, is based on the responses of *Never*.
 - For this example, 57 people selected *Never*. To produce an overall score for **Lethal Means Never Safely Stored** representing unfavorable responses to this question, the number of responses (57) is divided by the total number of people who responded to the *Safe Storage for Lethal Means* question. 107 people responded to the question. **This produces a Lethal Means Never Safely Stored rating of 53% ($57 / 107 = .5327$).**
- The **Lethal Means Sometimes Safely Stored** rating is a combination of all responses of *Rarely* and *Sometimes*.
 - For this example, two people selected *Rarely* and three selected *Sometimes*. In total, five responses were either *Rarely* or *Sometimes* to this question ($2+3 = 5$).
 - To produce a score for **Lethal Means Sometimes Safely Stored**, the total number of responses (5) is divided by the total number of people who responded to the *Safe Storage for Lethal Means* question (107). **This produces a Lethal Means Sometimes Safely Stored rating of 5% ($5 / 107 = .0467$).**

- To create the **favorable** rating, named **Lethal Means Usually Safely Stored**, the *Often* and *Always* responses are combined.
 - For this example, that is $14+31 = 45$ total responses of either *Often* or *Always*. This total is divided by the total number of responses to the question ($45 / 107 = .4206$). **This rounds to a Lethal Means Usually Safely Stored rating of 42%.**

How do I know if my factor ratings are good or bad?

The DEOCS team is working on a data-driven approach that will help you understand what a rating means for an organization's likelihood of positive or negative outcomes. In the meantime, we recommend using the following strategies to help put your *Safe Storage for Lethal Means* ratings into context and understand whether actions should be taken to address low favorable ratings:

1. If applicable, review the information in the alert icon  to see if your *Safe Storage for Lethal Means* ratings are called out. This icon would appear in the dashboard and in the PDF reports if your unit's/organization's favorable rating for *Safe Storage for Lethal Means* is very low compared to others in your same Service component. You should consider taking action to raise this rating.
2. Examine the bar graph showing the overall favorable rating for *Safe Storage for Lethal Means* and the favorable ratings by various demographic groups. Look at each group's rating in relation to the overall unit/organization rating. If any groups have particularly low favorable ratings for *Safe Storage for Lethal Means*, this could help you plan actions to increase your favorable rating within areas of your organization.
3. If applicable, review your *Safe Storage for Lethal Means* favorable rating trends over time. You can view these trends by clicking on this icon  in the dashboard; they also appear as a table in the PDF reports. Take note if your ratings are going down over time. You may need to take action to reverse this trend.

Factor Improvement Tools for Safe Storage for Lethal Means

The following resources may be useful as you make plans or take action to improve your *Safe Storage for Lethal Means* ratings. Each resource listing contains a description, a link, and the relevant audience. Some resources may be more appropriate for the commander/leader, unit/organization personnel, survey administrators, or the Integrated Primary Prevention Workforce (IPPW); the relevant audience advises which group may benefit from use of the recommended resource.

- **Lethal Means Safety for Military Service Members and Their Families.** Guide for military community on reducing access to firearms for suicide prevention.
https://www.dspo.mil/Portals/113/Documents/DSPO%20Lethal%20Means%20Safety%20Guide%20for%20Military%20Service%20Members%20and%20Their%20Families_v34_FINAL.pdf?ver=AF6RRG7pGAlcAqjtQQDyVg%3D%3D
 Audience: Commander/Leader, unit personnel, survey admin, IPPW
- **Reducing Access to Firearms: A Suicide Prevention Guide for Military Leaders.** Guide for military leaders on reducing access to firearms for suicide prevention.
[https://www.med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Documents/health-promotion-wellness/psychological-emotional-wellbeing/Lethal Means Leaders 9-2020 508 0.pdf](https://www.med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Documents/health-promotion-wellness/psychological-emotional-wellbeing/Lethal%20Means%20Leaders%209-2020%20508%200.pdf)

Scientific Research References on Safe Storage for Lethal Means

1. Yip, P. S., Caine, E., Yousuf, S., Chang, S. S., Wu, K. C. C., & Chen, Y. Y. (2012). Means restriction for suicide prevention. *The Lancet*, 379(9834), 2393-2399.
2. Shenassa, E. D., Rogers, M. L., Spalding, K. L., Roberts, M. B. (2004). Safer storage of firearms at home and risk of suicide: a study of protective factors in a nationally representative sample. *Journal of Epidemiology & Community Health*. 58(10), 841-848. doi:10.1136/jech.2003.017343
3. Simon, R. I. (2007). Gun safety management with patients at risk for suicide. *Suicide and Life-Threatening Behavior*, 37(5), 518-526.
4. Stanley, I. H., Hom, M. A., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical Psychology Review*, 44, 25–44. <https://doi.org/10.1016/j.cpr.2015.12.002>
5. Centers for Disease Control and Prevention (n.d.). Web-based Injury Statistics Query and Reporting System (WISQARS). Retrieved August 24, 2021 from <http://www.cdc.gov/injury/wisqars/index.html>
6. Department of Defense, Under Secretary of Defense for Personnel and Readiness (2020). Annual Suicide Report for Calendar Year 2019. <https://www.dspo.mil/Portals/113/Documents/CY2019%20Suicide%20Report/DoD%20Calendar%20Year%20CY%202019%20Annual%20Suicide%20Report.pdf?ver=YO A4IZVcVA9mzwtsfdO5Ew%3D%3D>
7. U.S. Department of Health and Human Services (HHS) Office of the Surgeon General and National Action Alliance for Suicide Prevention. (2012). 2012 National Strategy for Suicide Prevention: Goals and Objectives for Action (p. 184). HHS. www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/index.html [INTRODUCTION, specifically the graphic on page 15 which is adapted from Dahlberg LL, Krug EG. Violence-a global public health problem. In: Krug,E, Dahlberg LL, Mercy JA, Zwi AB, Lazano R, eds. World report on violence and health. Geneva, Switzerland: World Health Organization; 2002: 1-56]
8. Nock, M. K., Stein, M. B., Heeringa, S. G., Ursano, R. J., Colpe, L. J., Fullerton, C. S., ... Kessler, R. C. (2014). Prevalence and Correlates of Suicidal Behavior Among Soldiers. *JAMA Psychiatry*, 71(5), 514. doi: 10.1001/jamapsychiatry.2014.30
9. Saxena, S., Krug, E. G., and Chestnov, O. (2014). Preventing suicide: a global imperative. World Health Organization. <https://apps.who.int/iris/handle/10665/131056>
10. Stone, D. M., Holland, K., Bartholow, B., Crosby, A., Davis, S., & Wilkins, N. (2017). Preventing Suicide: A Technical Package of Policy, Programs, and Practices (p. 62). National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
11. Klonsky, E., & May, A. (2010). Rethinking impulsivity in suicide. *Suicide and Life-Threatening Behavior*, 40(6), 612–619. doi: 10.1521/suli.2010.40.6.612
12. Swann, A. C., Lijffijt, M., O'Brien, B., & Mathew, S. J. (2020). Impulsivity and suicidal

behavior. *Current Topics in Behavioral Neurosciences*, 47, 179-195. doi:
10.1007/7854_2020_144

13. Grossman, D. C., Mueller, B. A., Riedy, C., Dowd, M. D., Villaveces, A., Prodzinski, J., ... & Harruff, R. (2005). Gun storage practices and risk of youth suicide and unintentional firearm injuries. *Jama*, 293(6), 707-714.
14. North Atlantic Treaty Organization, Science and Technology Organization. (2018). *Military suicide prevention: Report prepared for NATO leadership (TR-HRM-218)*. <https://bit.ly/2rbkOZs>