Suicides by Jump/Fall from Bridges in Maryland

Technical Assistance Packet

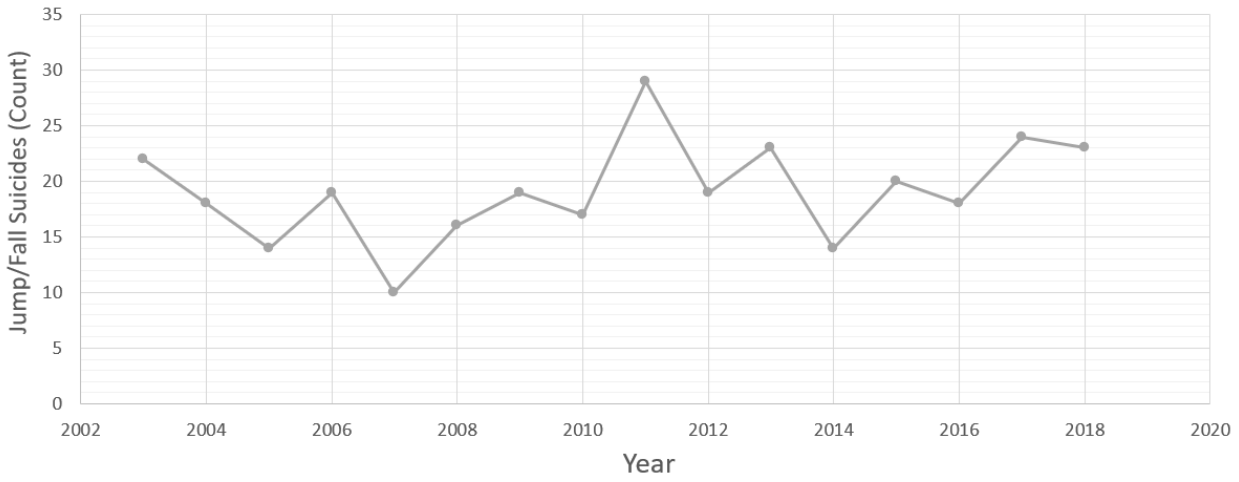
Current Maryland Data

Below is a compilation of suicide fatalities recorded by the Maryland Violent Death Reporting System (MVDRS) from 2003-2018. Of the 8712 suicide fatalities over the past five years, 305 were jumps or falls, accounting for 3.5% of total suicide deaths. Jump/fall suicides can be associated with a variety of elevated structures, including residential buildings, parking garages, or natural features. A substantive percentage of these jump/fall suicides are linked to bridges and overpasses, some of which are sites for multiple suicides.

Table 1.1 Suicide Fatalities by Selected Means of Death, Maryland MVDRS 2003-2018

Cause of Death	Number of Fatalities	Percent of Fatalities
All Causes	**8712**	**100%**
Firearm	3946	45.3%
Hanging or Suffocation	2616	30%
Poisoning	1334	15.3%
Jump/Fall	305	3.5%
All other means	511	5.9%

Figure 1.1 Suicide Fatalities by Jump/Fall, Maryland MVDRS 2003-2018



Assessing Potential Interventions

Means Restriction: Installing Barriers or Nets

One of the strongest evidence-based methods of preventing suicide involves restricting access to lethal means for individuals at risk of suicide. Individuals who experience suicidal crisis often have a preferred method, and research shows that the risk of attempt decreases significantly if the preferred method is rendered inaccessible. Restricting lethal means is particularly effective as it modifies the environment for everyone, protecting individuals at risk who might otherwise be undetected or who are unwilling to seek help when experiencing crisis. [1]

Jumping or falling from a structure is a highly lethal means of suicide. Restricting jumps/falls from structures, particularly bridges and overpasses, involves the installation of physical barriers (fences, walls, etc.) and/or safety nets. Barriers can significantly reduce the number of attempts, and safety nets can limit the lethality of attempts. Studies conducted internationally – including the Jacques-Cartier Bridge in Canada [2], the Gateway Bridge in Australia [3], and the Clifton Bridge in the UK [4] – showed that installing barriers reduces jump suicides from modified bridges significantly. Moreover, these studies showed that there was little to no substitution when barriers were erected at these bridges. Suicides did not increase significantly from other local bridges, even if the other bridges were close by or did not have barriers.

Locally, the Duke Ellington Bridge in Washington, DC was historically a hotspot for jump/fall suicides. In 1985, a barrier was installed, which resulted in a dramatic reduction in suicides. In the 7 years preceding the barrier installation, 24 people died by suicide at the bridge; in the 5 years following installation, only one person died by suicide there. Nearby bridges did not see an increase in suicides. [5]

Reviews that compare suicide prevention methods show that means restriction for bridges are effective, particularly when compared to helpline signage or callboxes. [6] Recommendations for barriers include having a height that would be difficult to climb over (2-4 meters high), angling the top of the barrier inward, and securing the full length of the structure. Safety nets are also effective deterrents, particularly when fixed well below the bridge's pedestrian level. [7]

Assessing Potential Interventions

Hotline Signage and Callboxes

Installing suicide prevention or crisis hotline signage along a structure is a common intervention pursued to curb jump/fall suicides. In some cases, this signage is accompanied by callboxes that connect individuals directly to resources. However, while these interventions may appear to be highly impactful, there is little evidence to support their effectiveness.

Suicide prevention signage and phone installation, without an accompanying installation of barriers, do not have a strong evidence base to support their implementation. [7] On the contrary – the results of some studies actually suggest that signage or callboxes without other interventions can be harmful, and can heighten public perception of certain structures as "suicide hotspots." When crisis phones and signs were installed without additional barriers on Florida's Skyway Bridge in 1999, some individuals did use callboxes to seek help. However, contrary to expectations, there was also a significant increase in suicides from the bridge in the following 13 years (averaging 4.5 additional suicides per year). As this case illustrates, the heightened "hotspot" perception of bridges that only have signage or callboxes can increase the risk of suggestion or suicide contagion. [8]

Not only do these interventions perpetuate associations between certain structures and suicide, they are also not universally protective. While barriers and nets protect a wide range of individuals at risk of suicide, callboxes and crisis information are only useful for those who are ambivalent about suicide or willing to seek help. When used in conjunction with barriers and/or nets, signage and callboxes can be useful. However, they are not recommended as independent interventions.

It is the official stance of the National Suicide Prevention Helpline that it is not effective to install signage or callboxes along structures without also installing adequate means restriction (barriers and/or nets).

For more information, please refer to this official statement from the National Suicide Prevention Lifeline:

https://suicidepreventionlifeline.org/wp-content/uploads/2017/04/Suicide-Bridges-National-Suicide-Prevention-Lifeline-Position-2017-FINAL.pdf

References

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Contact Us

The Office of Suicide Prevention, housed under MDH-BHA, provides technical assistance to stakeholders throughout the State of Maryland. If you have questions or concerns, contact us at mdh.suicideprevention@maryland.gov.