OUTCOMES – SIDEBAR

Instilling Hope for All North Carolinians: Reducing Our Suicide Rate by 2030

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North Carolina has set a bold goal to reduce our suicide rate to 11.1 per 100,000 by the year 2030 [1]. This article explores our pathway there using key prevention strategies, multi-stakeholder partnerships, and hope.

"When it is darkest, we can see the stars." With these words, Ralph Waldo Emerson offers us hope, the psychological antidote to suicide. Suicide is defined as the intentional act of taking one's life, but fundamentally it is the catastrophic loss of hope. Unsurprisingly, hopelessness is one of the strongest predictors of death by suicide [2]. While we must facilitate hope at an individual psychological level, we must also take comprehensive public health action at the population level. Suicide is not simply an individual threat, but an existential one, as it is increasingly claiming the lives of our nation's youth. Among Americans aged 10–24, suicide rates between 2007 and 2017 increased 56% [3], and by 2019 suicide was the second leading cause of death for ages 10–34 [4]. Additionally, every hour in the United States we lose an older adult to suicide [5].

Suicide and suicide attempts take an immense psychological toll on individuals, families, and communities. There are also enormous financial costs, and we simply cannot afford to delay action. Suicide deaths alone are estimated to cost the US economy over $463 billion in combined costs per year (using 2019 data) [6]. In 2019 in North Carolina, deaths by suicide led to 26,918 years of potential life lost before the age of 65 [7], and over $13 billion in combined costs [6]. We also know the COVID-19 pandemic has had substantial impacts on behavioral health. Nationally, mental-health-related pediatric emergency department visits are increasing, especially among adolescent girls [8, 9]. In North Carolina, emergency department presentations for opiate overdoses among adults are increasing, which is disappointing given the progress made before the pandemic [10].

There is also important health disparity work to be done, as populations that routinely experience discrimination are disproportionately affected by suicide. Alarmingly, data analysis of the Youth Behavior Risk Survey (YBRS) revealed Black adolescents had the highest increase in the prevalence of suicide attempts between 1991 and 2019 of any race/ethnicity [11], and lesbian, gay, and bisexual youth experienced more violence victimization and reported more suicide risk behaviors than heterosexual youth between 2015 and 2019 [12]. Transgender youth reported higher suicide risk than cisgender youth in a separate analysis of 2017 YBRS data [13]. Veterans are also at increased risk; the suicide rate between 2014 and 2018 was 2.4 times higher among veterans than nonveterans [14].

Lest one lose hope, suicide is preventable and 9 out of 10 people who survive suicide attempts do not later die by suicide [15]. The public health approach by the Centers for Disease Control and Prevention to stop suicide entails reducing factors that increase suicide risk and increasing factors that promote population resilience [16]. With Healthy North Carolina 2030, the North Carolina Institute of Medicine, in partnership with the North Carolina Department of Health and Human Services (NCDHHS) aims to reduce the 2018 suicide rate of 13.8 per 100,000 to 11.1 per 100,000 by the year 2030 [1]. Given North Carolina's current estimated population of 10 million, this goal translates to 270 lives saved per year in our state alone.

In 2022, NCDHHS will release a comprehensive suicide

prevention plan for North Carolina. Core plan components are previewed here. Every North Carolinian can participate in reducing suicide, and collectively our impact could be profound. Research has shown asking about suicide does not promote suicidal ideation, even among adolescents [17]; this unfortunate myth is rooted in stigma and must be dispelled. Not asking about suicide can be deadly. Since help is available 24/7/365 (including chat) through the national suicide prevention lifeline, anyone and everyone can link loved ones to care by saving **1-800-273-TALK (8255)** in our cell phones. By July 2022, it will be as simple as dialing or texting three digits, 9-8-8, nationwide [18]. As a state, we must build a coordinated infrastructure to raise awareness, ensure policy implementation, and conduct public health surveillance of measures of population behavioral health, including self-harm and suicide. Statewide coalitions should include local partners, mental health professionals, and loss/attempt survivors.

Reducing access to lethal means must be a primary intervention for decreasing North Carolina's suicide rates. Over 57% of completed suicides in North Carolina in 2019 involved a firearm [6]. Nationally, firearm sales have increased dramatically (over 70%) during the pandemic, based on FBI background check data [19]. Some communities in North Carolina, such as Durham, already have gun safety teams [20], but there is a need to implement safe storage practices statewide and provide easy access to inexpensive gun locks. We need statewide "gatekeeper" (individuals with regular contact with community members) [21] training that uses approaches such as CALM (counseling on access to lethal means) [22]. CALM training is available online at no cost and all gatekeepers and health care providers should be trained to reduce lethal means. We should also educate our health care workforce about military culture and veteran suicide risk, and utilize evidence-based training programs such as Psych/Armor [23].

Supporting behavioral health and building resilience are key NCDHHS priorities coming out of the COVID-19 pandemic. To increase North Carolina's resilience, we must build a comprehensive crisis system that is independent of geography and payer/insurance status. Telehealth, a necessity during the pandemic, has proven to be acceptable and effective for many patients [24]. Facing increasing workforce shortages associated with the COVID-19 pandemic, telehealth is a powerful tool that must be used to bridge provider gaps and ensure access in rural areas. Mobile crisis teams, which reduce hospitalization and can achieve high satisfaction rates, should be expanded, especially for youth [25]. Equally important is the expansion of crisis intervention training (CIT) for law enforcement, because of CIT's effectiveness in reducing the criminalization of mental illness [26].

Finally, North Carolina should expand Medicaid. Expansion would ensure a sustainable crisis system and contribute to decreased suicide rates. Researchers have demonstrated decreased death by suicide among nonelderly adults in states that have expanded Medicaid [27]. Taken collectively, these strategies can reduce suicide and enhance well-being in North Carolina. This is our opportunity to instill hope for generations to come. NCM

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References

1. North Carolina Department of Health and Human Services and North Carolina Institute of Medicine. *Healthy North Carolina 2030: A Path Toward Health*. NCIOM; 2020. Accessed February 13, 2022. https://nciom.org/wp-content/uploads/2020/01/HNC-REPORT-FINAL-Spread2.pdf
2. Brown GK, Beck AT, Steer RA, Grisham JR. Risk factors for suicide in psychiatric outpatients: a 20-year prospective study. *J Consult Clin Psychol*. 2000;68(3):371–377. PMID: 10883553
3. Abott B. Youth Suicide Rate Increased 56% in Decade, CDC Says. *The Wall Street Journal*. Published October 17, 2019. Accessed February 25, 2022. https://www.wsj.com/articles/youth-suicide-rate-rises-56-in-decade-cdc-says-11571284861
4. Centers for Disease Control and Prevention (CDC) Facts About Suicide. CDC website. Accessed February 13, 2022. https://www.cdc.gov/suicide/facts/index.html
5. Drapeau CW, McIntosh JL. U.S.A. *Suicide: 2018 Official Fi-*

nal Data. American Association of Suicidology; 2020. Accessed March 21, 2022. https://suicidology.org/wp-content/uploads/2020/02/2018datapgsv2_Final.pdf
6. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. WISQARS – Web-based Injury Statistics Query and Reporting System. Search terms: all injury, fatal, suicide intent, all ages, all genders, and 2019. CDC website. https://www.cdc.gov/injury/wisqars/ Accessed February 18, 2022.
7. American Foundation for Suicide Prevention. ***Suicide Data: North Carolina***. AFSP; 2021. Accessed February 17, 2022. https://aws-fetch.s3.amazonaws.com/state-fact-sheets/2021/2021-state-fact-sheets-north-carolina.pdf
8. Leeb RT, Bitsko RH, Radhakrishnan L, Martinez P, Njai R, Holland KM. Mental health–related emergency department visits among children aged <18 years during the COVID-19 pandemic – United States, January 1–October 17, 2020. *MMWR Morb Mortal Wkly Rep*. 2020;69(45):1675–1680. doi: 10.15585/mmwr.mm6945a3
9. Radhakrishnan L, Leeb RT, Bitsko RH, et al. Pediatric emergency department visits associated with mental health conditions before and during the COVID-19 pandemic – United States, January 2019–January 2022. *MMWR Morb Mortal Wkly Rep*. 2022;71(8):319–324. doi: 10.15585/mmwr.mm7108e2
10. North Carolina Department of Health and Human Services, Division of Public Health, Chronic Disease and Injury Section, Injury and Violence Prevention Branch. *North Carolina Emergency Department (ED) Visits for Opioid Overdose: January 2022*. NCDHHS; 2022. Accessed February 15, 2022. https://www.injuryfreenc.ncdhhs.gov/DataSurveillance/StatewideOverdoseSurveillanceReports/OpioidOverdoseEDVisitsMonthlyReports/StatewideOpioidOverdoseSurveillanceEDDataJan2022.pdf
11. Xiao Y, Cerel J, Mann JJ. Temporal trends in suicidal ideation and attempts among US adolescents by sex and race/ethnicity, 1991-2019. *JAMA Netw Open*. 2021;1;4(6):e2113513. doi: 10.1001/jamanetworkopen.2021.13513
12. Johns MM, Lowry R, Haderxhanaj LT, et al. Trends in violence victimization and suicide risk by sexual identity among high school students – Youth Risk Behavior Survey, United States, 2015–2019. *MMWR Suppl*. 2020;69(1):19–27. doi: 10.15585/mmwr.su6901a3
13. Johns MM, Lowry R, Andrzejewski J, et al. Transgender identity and experiences of violence victimization, substance use, suicide risk, and sexual risk behaviors among high school students - 19 states and large urban school districts, 2017. *MMWR Morb Mortal Wkly Rep*. 2019;68(3):67–71. Published 2019 Jan 25. doi:10.15585/mmwr.mm6803a3
14. North Carolina Department of Health and Human Services, Division of Public Health, Chronic Disease and Injury Section, Injury and Violence Prevention Branch, Data and Surveillance. *Veteran Suicide in North Carolina, 2014-2018*. NCDHHS; 2019. Accessed February 17, 2022. https://www.injuryfreenc.ncdhhs.gov/DataSurveillance/VDRS/VeteranSuicide2014_2018_FINAL.pdf
15. Harvard T.H. Chan School of Public Health. Means Matter: Attempters' Longterm Survival. HSPH website. Published 2021. Accessed 2022 February 13. https://www.hsph.harvard.edu/means-matter/survival/
16. Centers for Disease Control and Prevention. Suicide Prevention: Prevention Strategies. CDC website. Reviewed June 4, 2021. Accessed February 13 2022. https://www.cdc.gov/suicide/prevention/index.html
17. Mathias CW, Michael Furr R, Sheftall AH, Hill-Kapturczak N, Crum P, Dougherty DM. What's the harm in asking about suicidal ideation? *Suicide Life Threat Behav*. 2012;42(3):341–351. doi: 10.1111/j.1943-278X.2012.0095
18. Federal Communications Commission. Suicide Prevention Hotline. FCC website. Accessed February 13, 2022. https://www.fcc.gov/suicide-prevention-hotline
19. Federal Bureau of Investigation. NICS Firearm Checks: Month/Year. FBI website. Accessed February 17 2022. https://www.fbi.gov/file-repository/nics_firearm_checks_-_month_year.pdf/view
20. Durham County Public Health. Gun Safety Program. Accessed 2022 February 13. https://www.dcopublichealth.org/services/health-education/health-promotion-and-wellness/gun-safety-program
21. Burnette C, Ramchand R, Ayer L. Gatekeeper training for suicide prevention: a theoretical model and review of the empirical literature. *Rand Health Q*. 2015;5(1):16. PMID: 28083368
22. Suicide Prevention Resource Center. CALM: Counseling on Access to Lethal Means. SPRC website. Published 2018. Accessed 2022 February 13. https://www.sprc.org/resources-programs/calm-counseling-access-lethal-means
23. Psych/Armor. Accessed February 17, 2022. https://psycharmor.org/
24. Chen JA, Chung WJ, Young SK, et al. COVID-19 and telepsychiatry: early outpatient experiences and implications for the future. *Gen Hosp Psychiatry*. 2020;66:89–95. doi: 10.1016/j.genhosppsych.2020.07.002
25. Scott RL. Evaluation of a mobile crisis program: effectiveness, efficiency, and consumer satisfaction. *Psychiatr Serv*. 2000;51(9):1153–1156. doi: 10.1176/appi.ps.51.9.1153
26. National Alliance on Mental Illness. Crisis Intervention Team (CIT) Programs. NAMI website. Accessed 2022 February 13. https://www.nami.org/Advocacy/Crisis-Intervention/Crisis-Intervention-Team-(CIT)-Programs
27. Austin AE, Naumann RB, Short NA. Association between Medicaid expansion and suicide mortality among nonelderly US adults. *Am J Epidemiol*. 2021;190(9):1760–1769. https://doi.org/10.1093/aje/kwab130

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