

Addressing the Intersection of Suicide, Overdose, and Adverse Childhood Experiences: What Is the Capacity of Local Health Departments?

**RESULTS FROM THE NATIONAL
FIELDING OF THE SPACECAT**

NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

Executive Summary

Purpose of Report

The National Association of County & City Health Officials (NACCHO), in collaboration with the Association of State & Territorial Health Officials (ASTHO), developed the Suicide, Overdose, and Adverse Childhood Experiences Prevention Capacity Assessment Tool (SPACECAT). The tool was created to survey local, state, and territorial health departments to collect data regarding their capacity to address suicide, overdose, and adverse childhood experiences (ACEs) prevention. In a national fielding, health departments across the United States were invited to complete the tool. NACCHO analyzed the data from local health departments (LHDs), while ASTHO analyzed the data from state and territorial health departments.

This report provides a summary of LHDs reporting of their capacities to address the intersection of suicide, overdose, and ACEs in eight capacity domains:

- Networked partnerships,
- Multilevel leadership,
- Managed resources,
- Data and surveillance,
- Shared planning and strategic plans,
- Evidence-based strategies for suicide, overdose, and ACEs prevention,
- Health disparities, and
- Workforce capacity.

Methods Used

NACCHO used a stratified random sampling design to draw a representative sample of 703 LHDs with a slight oversample of larger LHDs. The final data set included 101 unique responses. Results were weighted by size of population served via post stratification to account for differing nonresponse and study design to provide nationwide estimates. For the analysis, LHD sizes were divided into small (serving <50,000 people), medium (serving 50,000-499,999 people), and large (serving 500,000 or more people) health departments.

Findings and Conclusions

The report details several areas in which LHDs reported strengths, including:

- Inclusion of the perspectives of those with lived experience,
- Partnerships across sectors,
- Strategic planning across prevention focus areas

The report also details obstacles LHDs face in addressing the intersection of these three areas of prevention, including:

- A lack of funding and/or staffing resources;
- Competing priorities (e.g., COVID-19);
- Limited data integration among the three prevention areas;
- Lack of capacity to address specific at-risk populations and risk and protective factors for ACEs, suicide, and overdose.

Furthermore, there are more resources available to LHDs for overdose prevention efforts than for suicide and ACEs prevention. The analysis also shows the vast differences in resources are available to medium and large LHDs in comparison to small LHDs.

Recommendations

NACCHO's recommendations for next steps to address the intersection of suicide, overdose, and ACEs prevention include:

1. Increasing collaboration across these three prevention areas.
2. Leveraging capacity in overdose prevention.
3. Consideration of both upstream and downstream approaches in these three areas of prevention.
4. Further development of partnerships and sustainable funding sources.

Table of Contents

Addressing the Intersection of Suicide, Overdose, and Adverse Childhood Experiences: What Is the Capacity of Local Health Departments?

4 Introduction

- Development of the SPACECAT
- Structure of the SPACECAT

8 Methods

10 Results of the National Fielding

- Staffing
- Risk & Protective Factors
- Infrastructure Capacity
 - Networked Partnerships | Multilevel Leadership | Managed Resources
 - Data and Surveillance | Shared Planning and Strategic Plans
 - Local Health Department Challenges
- Topical Capacity
 - Evidence Based Practice | Health Disparities | Workforce Capacity

37 Conclusion and Recommendations

45 Citations

46 Appendix

Report Authors

Katherine Palm, MSW

Lane Davis, MPH

Data cleaning and analysis provided by Margaret Cunningham, MPH, RN

Data cleaning and software programming by Kyle Brees, MA

Data visualization provided by Kellie Hall, MSOD

Report Editors

Amie Myrick, MS, LCPC

Caroline Snyder, MPH

NACCHO would like to thank the Centers for Disease Control and Prevention (CDC) for providing financial support for this work, under cooperative agreement CDC #6 NU380T000-04-01. We also would like to thank the experts from local health departments who volunteered their time to participate in our survey.



Introduction

The American Public Health Association has recognized suicide, overdose, and adverse childhood experiences (ACEs) as three of the most urgent public health challenges in the United States (US).¹ The shared risk and protective factors of suicide, overdose, and ACEs present both a challenge and an opportunity for targeted prevention efforts.

Research has demonstrated that childhood adversity may negatively affect brain development and function, with lasting consequences for one's long-term mental, physical, and emotional health and wellbeing. Importantly, some of the adult health outcomes most strongly associated with multiple ACEs include violence perpetration and victimization, drug use, and suicide attempts.² Exposure to a higher number of ACEs is associated with earlier age of initiating opioid use, recent injection drug use, and the likelihood of experiencing an overdose.³ Further, experiencing adversity in childhood may set the stage for suicidal risk by exposing the individual to accruing risk factors over time.⁴ The odds of attempting suicide are 30 times greater for adults with four or more ACEs compared to those with none.² For those individuals who struggle with suicidality and/or substance use and have children, the cycle of accumulating ACEs and the associated risks continues into the next generation.

These three public health issues are inextricably linked to trauma across multiple generations. Local health departments (LHDs) are uniquely positioned to address both immediate and long-term health needs, as they often serve as a central point through which multi-sector collaborations interact to improve their community's health. LHDs can implement cross-cutting and upstream prevention strategies to promote population health across the social ecology. Thus, it is crucial to understand and strengthen the capacity of LHDs to address the shared risk and protective factors and take an integrated approach to suicide, overdose, and ACEs prevention.

These three public health issues are inextricably linked to trauma across multiple generations

ACES

.1 in 6

adults have experienced 4+ types of ACEs⁵

.5 of the top 10

leading causes of death are associated with ACEs⁵

.140,000 children

in the US experienced the death of a parent or grandparent caregiver from April 2020-June 2021⁶



In 2020:

.12.2 million

adults reported serious thoughts of suicide⁷

.1.2 million

adults had attempted suicide in the previous 12 months⁷

.Nearly 46,000 lives were lost to suicide⁸

Suicide



Overdose

In 2020:

.2.7 million

people had an opioid use disorder in the past year⁷

.More than 56,500

overdose deaths involving synthetic opioids⁹

.Nearly 92,000 drug overdose deaths⁹





Development of the SPACECAT

Recognizing the need to address the intersection of these issues, with funding from the Centers for Disease Control and Prevention (CDC), the National Association of County and City Health Officials (NACCHO) collaborated with the Association of State and Territorial Health Officials (ASTHO) to develop the Suicide, Overdose, and Adverse Childhood Experience Prevention Capacity Assessment Tool (known as [SPACECAT](#)). SPACECAT assesses the internal capacity of health departments to address suicide, overdose, and ACEs using a single tool.

The SPACECAT aims to enhance local, state, and territorial health departments' understanding of their capacity to address shared risk and protective factors for social and behavioral health outcomes. The assessment was designed to help health departments:

- identify assets, challenges, and technical assistance needs;
- provide insight for strategic planning and program improvement; and
- guide the exploration of future funding opportunities.

After developing the tool, ASTHO and NACCHO piloted the SPACECAT to a select number of state, territorial, and local health departments in spring of 2021. Results from the pilot informed revisions for the final version of the tool, which was launched to a nationally representative sample of LHDs in the fall of 2021.

Through this national fielding, the SPACECAT was disseminated to local, state, and territorial health departments throughout the United States. ASTHO conducted an analysis of data collected from state and territorial health departments and NACCHO conducted an analysis of data collected from LHDs. This report represents the summary analysis and findings from the national fielding of the SPACECAT for the representative sample of LHDs.

Structure of the SPACECAT

The tool is largely organized into eight capacity domains across two main categories:

Infrastructure Capacity

- Networked Partnerships
- Multilevel Leadership
- Managed Resources
- Data and Surveillance
- Shared Planning and Strategic Plans

Topical Capacity

- Evidence Based Strategies for Suicide, Overdose, and ACEs Prevention
- Health Disparities
- Workforce Capacity

Throughout the tool, certain questions ask respondents to use a scale to define their agency's capacity level in different areas. The capacity scale used is as follows:

0 = Not Applicable: The health agency may support this work in the community but does not do this work within the agency.

1 = No Capacity: The health agency does not perform this work and there is not currently a plan in place.

2 = Limited Capacity: The health agency has made preliminary efforts to do this work.

3 = Some Capacity: The health agency has assessed and developed initial responses in this work, but there are major gaps in the work.

4 = Full Capacity: The health agency has assessed and developed targeted initiatives with few gaps in the work.

Methods

NACCHO used a random sampling design, stratified by population size served, to draw a representative sample of 703 LHDs. LHDs were drawn from seven population strata and then reclassified into small, medium, and large LHDs for data analysis, which was weighted by size of population served via post stratification.

NACCHO analyzed the final SPACECAT dataset using Stata, providing descriptive statistics for answers to each question within the SPACECAT. After the initial round of analysis, NACCHO conducted cross-tabulation analysis based on classification of the LHDs' population sized served on select questions of interest.

Of 171 observations in the initial dataset, 54 were excluded as duplicates. An additional 33 observations were excluded because they included no responses to any items after Question 2. **The final dataset includes 101 unique deduplicated responses, each corresponding to a single LHD.**

Local Health Department Sizes in the national fielding were divided into:

Small
serving < 50,000 people

Medium
serving 50,000 – 499,999
people

Large
serving 500,000
people or more



Of the 101 unique, complete deduplicated responses:

- **39%** were from Small LHDs (n=39)
- **46%** were from Medium LHDs (n=46)
- **16%** were from Large LHDs (n=16)

There were a few limitations to note with this analysis, particularly regarding response rate. Despite the original sample of over 700 LHDs, NACCHO received only 171 responses. While NACCHO tried to confirm or update contact information for the dedicated point-of-contact within each of the LHDs in the sample, contact reconciliation presented a significant challenge. NACCHO also attempted to increase the response rate through reminder emails and phone calls, as well as deadline extensions, through its time in the field October 2021 through January 2022. Additional research would be needed to explore potential barriers to its completion (e.g., length of the tool, lack of staff time, perceived topical relevance, competing priorities such as pandemic response, etc.).

In addition, SPACECAT is not yet an externally validated tool. As such, NACCHO limited the analyses to categorical data rather than mean scores and examined each question individually to understand the LHDs' reported capacity in addressing each area of prevention. Further, due to the small size of the dataset, NACCHO did not conduct representativeness analyses. Lastly, NACCHO is unaware if one or multiple representatives from LHDs completed the SPACECAT, which may have affect on the results.



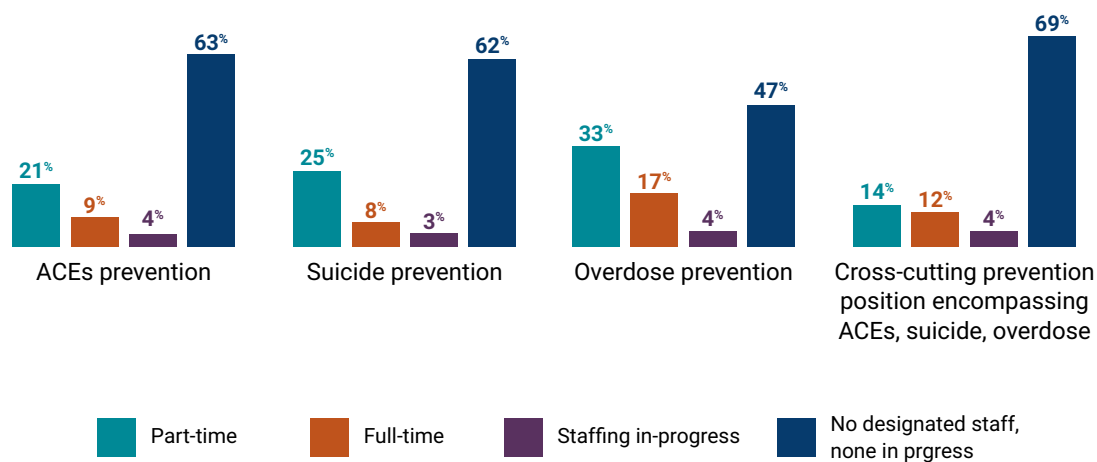
Results of the **National** **Fielding**



Staffing

The majority of LHD respondents did not have any part- or full -time staff designated to work on ACEs prevention, suicide prevention, or cross-cutting the three prevention areas. Approximately one third of respondents had part or full-time staffing for ACEs prevention (30%) and suicide prevention (33%), while just over a quarter of respondents had part- or full-time staffing for a cross-cutting prevention position encompassing ACEs, suicide, and overdose (26%). However, overdose prevention efforts were better staffed, with over 50% of respondents indicating some staffing for overdose prevention efforts.

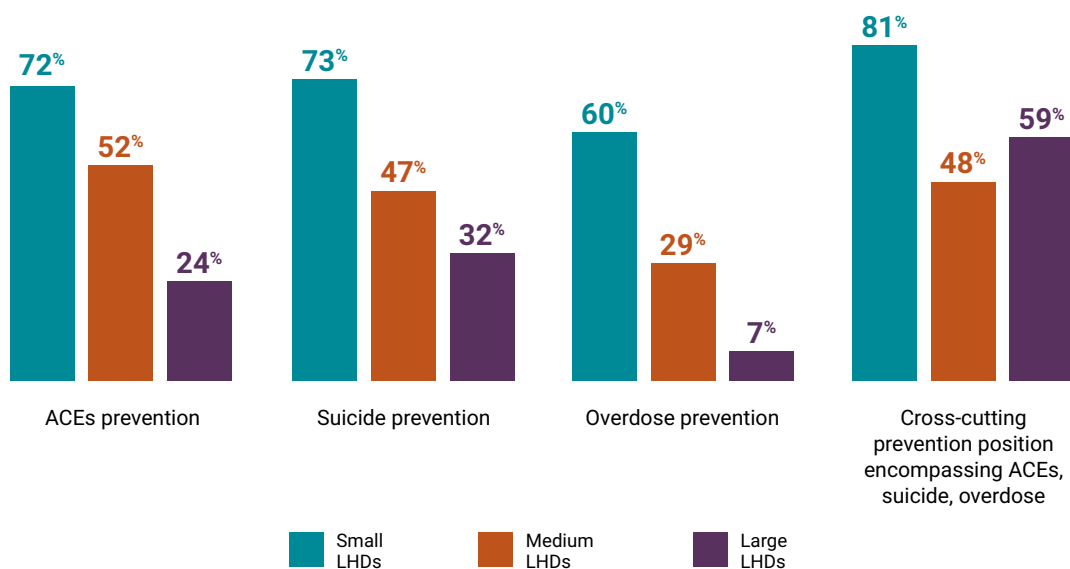
Figure 1: Staffing across areas of prevention efforts
Percent of respondents (n=101)





Across prevention areas, a larger percentage of small LHDs (those serving fewer than 50,000 people) reported having no designated staff and none in progress than did large LHDs (those serving 500,000 people or more). However, the relative magnitude of this disparity varied across prevention areas. The percentage of respondents reporting no staffing for ACEs and suicide prevention efforts was between two and three times greater for small compared to large LHDs. In contrast, just 1.4 times as many small LHDs reported no staffing for crosscutting ACEs, suicide, and overdose prevention efforts (81%) as did large LHDs (59%), and eight times as many small LHDs reported no staffing for overdose prevention efforts (60%) as did large LHDs (7%).

Figure 2: LHDs reporting no current designated staff and none in progress by size of population served and prevention area
Percent of respondents (n=100)



Key Takeaways

Fewer than a third of LHDs reported having any staff designated to work on each of the prevention areas except for overdose prevention

Half of LHDs reported having dedicated staff for overdose prevention efforts, but this increase in overdose prevention staffing compared to other prevention areas was concentrated among large LHDs



Risk and Protective Factors

ACEs, suicide, and overdose are complex, preventable issues that share similar root causes. Prevention requires understanding and addressing the overlapping factors that put people at risk for and/or protect them from experiencing these issues. The CDC provides additional information about risk and protective factors for [ACEs](#), [suicide](#), and [overdose](#).

LHDs were asked about their ACEs, suicide, and overdose prevention efforts' capacity to address risk and protective factors that operate within individuals, relationships, communities, and societies. LHDs tended to report lower capacity in community- and social-level factors compared to individual- and relationship-level factors, and in suicide prevention efforts compared to ACEs or overdose prevention efforts. Approximately one third of LHDs selected "N/A" for any given factor and topic, indicating they viewed the factor to be outside of their agency's scope.

Table 1: Intra- and interpersonal factors versus community, social, and structural factors

Intra- and Interpersonal Factors	Community, Social, and Structural Factors
Physical abuse	Financial challenges (e.g., unemployment)
Sexual abuse	Housing instability
Emotional abuse	Food insecurity
Parental separation or divorce	Providing social support
Emotional neglect	Providing extracurricular activities
Physical neglect	Reducing the stigma associated with help-seeking behaviors
Physical or intellectual disability	Enhancing health equity and addressing disparities
Family history of trauma	Teaching life skills (e.g., effective coping strategies and problem-solving skills)
Familial support	Access to quality medical care and mental health services
Educational attainment	Availability of lethal means (e.g., firearms or medications)
Access to basic needs	
Resiliency	
Self-efficacy	
Spirituality	
Violence in the household	
Substance misuse in household	
Mental illness in household	
Parental incarceration	



Results indicated overall low capacity to address shared risk and protective factors, with the percentage of LHDs reporting some or full capacity to address shared risk and protective factors ranging from 5% to 35%. LHDs indicated low capacity to address root causes, even among directly related topical areas. For example, only 21% of overdose prevention efforts had some or full capacity to address **substance misuse in the household**, and only 18% of ACEs prevention efforts had some or full capacity to address **violence in the household**. See Appendix B for full risk and protective factor results for each program focus area.

At the individual and relationship level, the lowest capacity areas included **spirituality**, **parental incarceration**, and **parental separation or divorce**, each of which fewer than 10% of respondents indicated having ACEs, suicide, or overdose prevention efforts with some or full capacity to address. At the community and society level, 11% or fewer of respondents reported having prevention efforts with some or full capacity to confront **financial challenges** (e.g., unemployment).

Relatively higher capacity areas included addressing **food insecurity**, **reducing the stigma associated with help-seeking behaviors**, **enhancing health equity** and **addressing disparities**, and **providing access to quality medical care and mental health services**, for each of which greater than 25% of respondents indicated having at least one of ACEs, suicide, and overdose prevention efforts with some or full capacity.

While relatively few participating LHDs reported some or full capacity to address root cause initiatives, an additional approximately one fifth to one third reported they had made at least preliminary attempts (i.e., limited capacity) to address them, regardless of prevention focus area.



Infrastructure Capacity

Infrastructure capacity includes components that affect program capacity, implementation, and sustainability. See the [Suicide Prevention Resource Center Infrastructure Capacity](#) for more information. The SPACECAT assessed capacity in networked partnerships, multilevel leadership, managed resources, data, strategic plans, and shared planning.

Networked Partnerships

Networked partnerships include relationships at all levels (national, state, local), across multiple sectors (health systems, public safety), and with multiple types of organizations (government, nonprofit), that can enhance coordination, extend reach, foster champions, and contribute to sustainability.

Capacity to Collaborate:

LHDs can extend their reach even when confronted with resource limitations by partnering with other organizations. LHDs may partner with other government agencies, either at the same jurisdictional level (e.g., county health departments partnering with other county health departments) or across jurisdictional level (e.g., county health departments partnering with state or city health departments). Partnerships may also form with organizations outside of the public sector, such as for-profit businesses, non-profit organizations, and health systems (collectively referred to as “private sector” in this report).

Within each partnership type and for each program focus area, approximately half of LHDs reported having some or full capacity to operate partnerships, and fewer than 15% of LHDs reported no partnership capacity. Fewer LHDs appear to have preliminary or full partnerships in place for suicide prevention efforts than for ACEs or overdose prevention efforts, regardless of partnership type. For example, while 56% and 57% of LHDs reported having some or full capacity to partner with an organization of the same jurisdictional level for ACEs and overdose prevention (respectively), a comparatively low 48% of LHDs reported the same for suicide prevention efforts.



Figure 3: Some or full capacity to collaborate with partners

Percent of respondents (n=98)

	Overdose Prevention	ACEs Prevention	Suicide Prevention
Partnerships with public sector at your same jurisdictional level	57%	56%	48%
Partnerships across different jurisdictional level	57%	50%	44%
Public-private partnerships	57%	54%	47%

While the percentage of small LHDs that described having some or full capacity to partner with government organizations (either within or across jurisdictional level) was roughly similar to the percentage of large LHDs reporting this partnership capacity, differences emerged when assessing partnerships with the private sector. Approximately half as many small LHDs reported some or full capacity to collaborate with organizations with the private sector as did medium or large LHDs.

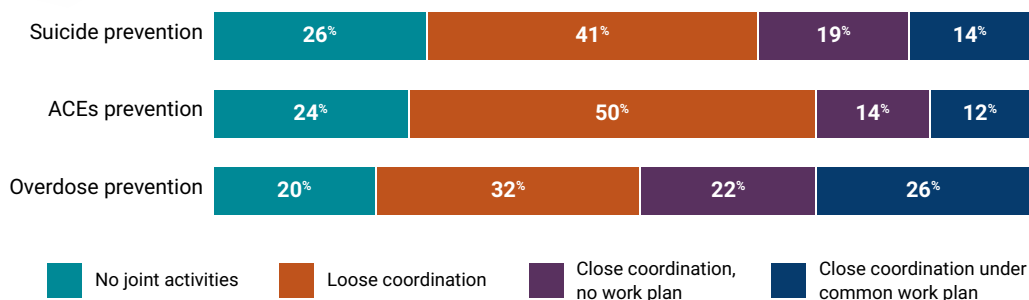


Level of Coordination:

Approximately three quarters of LHD respondents reported some level of coordination with critical partners in each of the prevention focus areas. About a third of respondents reported loose coordination with partners regardless of program focus area, but key differences between ACEs, suicide, and overdose prevention efforts emerged when examining the frequency of close coordination. For overdose prevention efforts, nearly half of respondents reported close collaboration (with or without a shared workplan), while approximately one third and one quarter reported the same for suicide and ACEs prevention efforts, respectively.

Figure 4: Level of coordination with critical partners by prevention area

Percent of respondents (n=98), weighted by population size



This greater coordination of overdose prevention efforts compared to those of suicide and ACEs was observed with medium and large LHDs, but not small LHDs. Over three quarters of medium and large LHDs but fewer than a third of small LHDs reported close collaboration on overdose prevention.



LHD Partners:

Across all programs, the most common partner organizations were **behavioral/mental healthcare organizations**, **local public health**, and **community-based coalitions**. The least common partners were **national level nonprofit/philanthropic organizations**, **for-profit business**, and **employment service organizations** (e.g., labor and unemployment offices). There were differences in partnering by prevention area. There was more likely to be coordination between overdose prevention efforts and most partner types. In contrast, fewer LHDs demonstrated coordination with **media organizations** and **veteran serving organizations** for ACEs prevention than suicide and overdose prevention efforts.

Key Takeaways

Approximately half of LHDs reported having some or full capacity to partner across sectors and jurisdictional levels.

Small LHDs reported less developed partnerships with private sector organizations than did medium or large LHDs.

LHDs tended to report lower capacity to partner in suicide prevention and a higher level of coordination in overdose prevention compared to suicide or ACEs prevention.



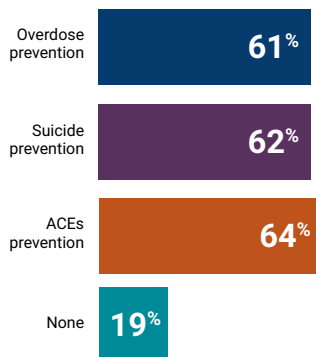
Multilevel Leadership

Multilevel leadership includes the people and processes that make up leadership at all levels that interact and collaborate to impact the program.

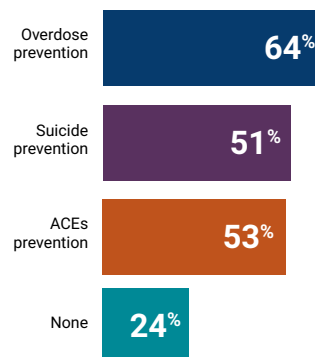
LHDs indicated whether leaders of each prevention area interacted both across sectors (e.g., maternal and child health, housing, and Medicaid) and at all jurisdictional levels (e.g., state, territory, county, and city). More than 75% of LHDs reported that there was leader interaction across sectors and/or jurisdictional levels in at least one prevention area. The percentage of respondents reporting leadership interaction was roughly similar across prevention area and type of interaction.

Figure 5: Interaction across multiple sectors and jurisdictional levels by prevention area

Interact across multiple sectors



Interact at all levels of government



Key Takeaway

More than three in four LHDs reported that leaders interact across sectors and/or jurisdictional levels in at least one prevention area.



Managed Resources

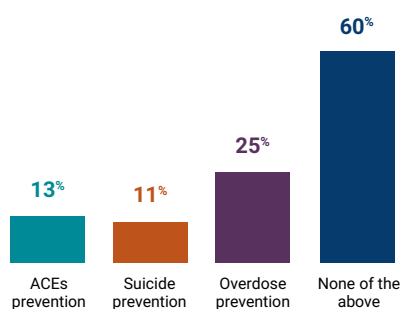
Managed resources refer to effectively monitoring resources as they are needed. Such resources may include but are not limited to sustained funding, funding sources, staffing, training, and internal resource sharing.

Sustained funding is reliable and recurrent, rather than a one-time or time-limited grant or other funding source. It allows LHDs to engage in long-term program and resource planning and is particularly critical for public health issues like ACEs, suicide, and overdose, for which the most effective strategies incorporate primary, secondary, and tertiary prevention.

Fewer than 40% of LHDs reported sustained funding for ACEs, suicide, or overdose prevention programming. Overdose prevention efforts more commonly had sustained funding, with a quarter of LHDs reporting a sustained funding source, in comparison to fewer than 15% of ACEs and suicide prevention efforts.

Figure 6: Prevention areas with sustained funding

LHDs self-reporting a sustained funding source for select program areas
Percent of respondents (n=95)

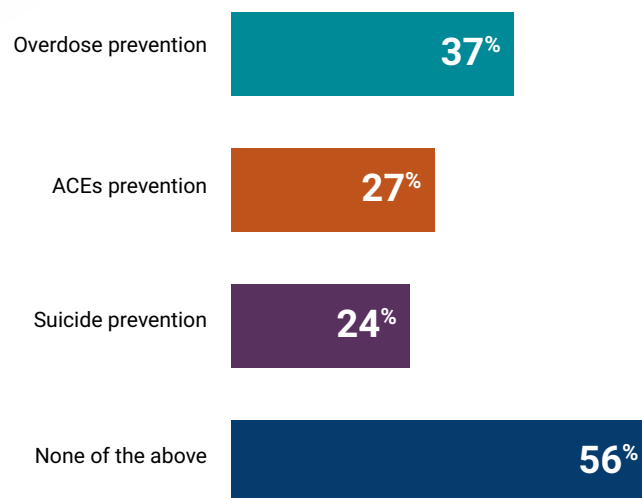




Internal resource sharing refers to pooling resources and sharing them across organizational boundaries. This presents an opportunity to break down silos between programs and create sustainability in addressing suicide, overdose, and ACEs. The analysis found that fewer than half of LHD respondents engaged in internal resource sharing across these three areas of prevention. However, LHDs were more likely to engage in internal resource sharing for overdose prevention efforts than for ACEs prevention and suicide prevention.

Figure 7: Prevention areas engaging in internal resource sharing

Percent of respondents (n=27-42)



Among LHD respondents, the top funding sources for all prevention areas were **state government** and **local government**, followed by **philanthropic organizations** for ACEs prevention and the Substance Abuse and Mental Health Services Administration (SAMHSA) for suicide and overdose prevention. For the purpose of this analysis, different federal agencies were considered separate funding agencies. State government was the most common funder among respondents, followed by **local government**, **SAMHSA**, **philanthropic organizations**, **the Health Resources and Services Administration (HRSA)** and the **CDC**.



More LHD respondents received funding from each of these six top funders for overdose prevention efforts than suicide or ACEs prevention, with the exception of philanthropic organizations. **Philanthropic organizations** funded a greater percentage of respondents' ACEs prevention efforts than either suicide or overdose prevention efforts. Among small LHDs, the percentage of respondents receiving funding was more evenly distributed among the three prevention areas, while overdose prevention funding was stronger than ACEs or suicide among large and medium LHDs.

Fewer than 25% of LHDs reported receiving funding from each of the remaining nine funding sources. In particular, veteran serving organizations such as the **Department of Defense** and **Veterans Affairs** provided funding to fewer than 10% LHD respondents' ACEs, suicide, or overdose prevention efforts.

Table 5: Funding sources by prevention area
(n=22-83)

	Funding Source	Overdose prevention	ACEs prevention	Suicide prevention	None
Top funders	State government	50%	38%	42%	32%
	Local government	35%	32%	29%	52%
	SAMHSA	31%	14%	24%	64%
	Philanthropic organizations	19%	26%	15%	70%
	HRSA	25%	16%	12%	71%
	CDC	24%	14%	12%	73%
Other funders	Admin. for Children and Families	9%	13%	6%	87%
	National Institutes of Health	12%	12%	10%	88%
	U.S. Dept. of Justice	10%	4%	2%	88%
	For-profit/private	6%	4%	2%	89%
	U.S. Dept. of Education	6%	6%	8%	90%
	Veterans Affairs	5%	1%	7%	93%
	Other	5%	2%	0%	93%
	HUD	3%	2%	0%	97%
	Dept. of Defense	0%	0%	0%	100%

Key Takeaways

Six out of 10 LHD respondents did not have sustained funding for ACEs, suicide, or overdose prevention.

LHDs were more likely to report sustained funding for overdose prevention than for ACEs or suicide prevention.



Data and Surveillance

Public health surveillance is “the ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice.”

While public health surveillance often examines one issue (e.g., the incidence of a particular disease), the SPACECAT asked respondents if their LHD used data to address the *intersection* of ACEs, suicide, and overdose prevention. Among all respondents, nearly half reported that they did not use data for this purpose, a quarter did not know, and 15% reported an effort in progress.

Figure 8: Percent of respondents reporting use of surveillance data to address the intersection of ACEs, suicide, and overdose prevention

Percent of respondents (n=92)

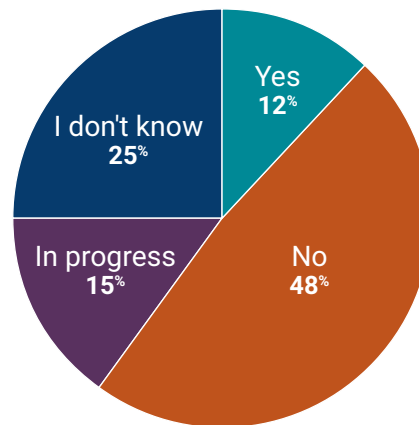


Table 6. Examples of data types

Data Type	Examples
Risk factor surveillance data	Behavioral Risk Factor Surveillance System, Youth Risk Behavior Survey
Morbidity surveillance data	National Medical Services Information System data
Mortality surveillance data	National Vital Statistics System, Fatality Review data, Vital Records Death Data, National Violent Death Reporting System
Syndromic surveillance data	Drug Overdose Surveillance and Epidemiology System, National Syndromic Surveillance Program BioSense Platform data, Emergency Department Surveillance of Nonfatal Suicide-Related Outcomes



Thirteen LHDs who reported using data or had a data effort in progress reported how they were using the data. Table 6 provides examples of data types.

- Nearly all of these respondents indicated using risk factor surveillance data, morbidity surveillance data, and mortality surveillance data to inform programmatic work for at least one of the three prevention focus areas.
- Syndromic surveillance data use was slightly less common for 10 out of 13 LHDs.
- More overdose programs than ACEs programs and more ACEs programs than suicide prevention efforts used risk factor surveillance, mortality data, and syndromic surveillance data.

Key Takeaway

Only one in eight respondents use surveillance data to address the intersection of ACEs, suicide, and overdose prevention.



Shared Planning and Strategic Plans

Strategic plans are formal written documents developed among program staff and partners. They should address changing conditions including scientific advancements, health agency priorities, resource constraints, and community needs and support. In addition, shared planning includes informal communication and collaboration that promotes cross-sectoral action and goal setting among program staff and partners.

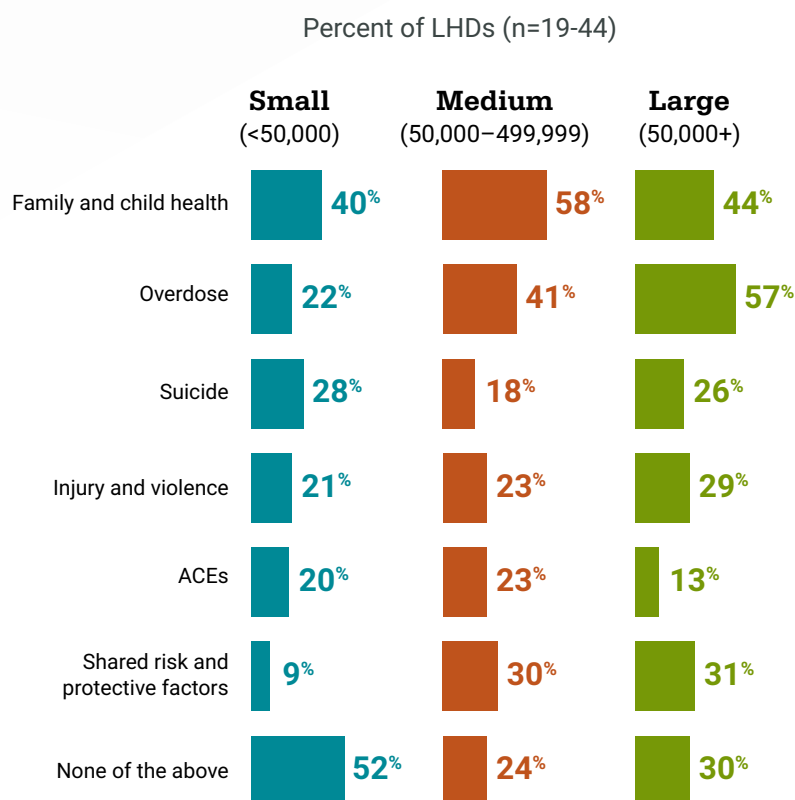
Overall, nearly 60% of LHDs respondents had strategic plans addressing at least one of six relevant topical areas:

- family and child health,
- overdose,
- suicide,
- injury and violence,
- ACEs, and
- shared risk and protective factors.



Seventy percent or greater of medium and large LHDs had strategic plans in place, whereas fewer than half of small LHDs reported having these plans. Among medium and large LHDs, **family and child health** and **overdose** were the two topics most frequently addressed in strategic plans, followed by **shared risk and protective factors**. For small LHDs, **family and child health** and **suicide** were the two topics most frequently addressed in strategic plans, whereas **shared risk and protective factors** was the least commonly addressed topic.

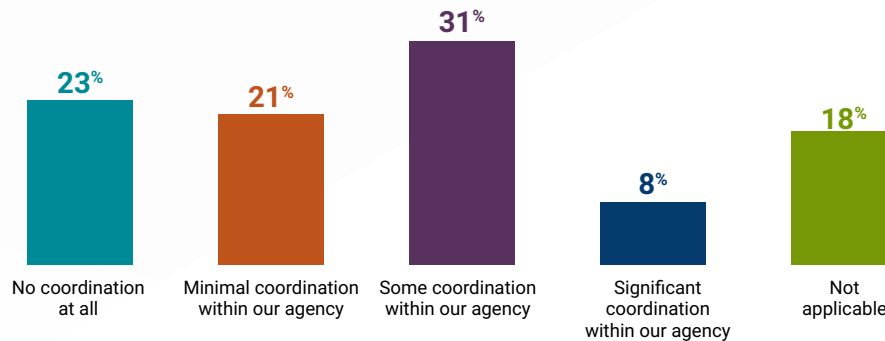
Figure 9: Existence of an agency strategic plan that addresses the topic, by population size served





Over 40% of respondents reported holding at least one quarterly or bi-annual scheduled planning meeting devoted to writing strategic prevention plans. The level of shared planning informing programmatic work similar to the level of coordination on written strategic plans.

Figure 10: LHDs' self-reported level of coordination in written strategic prevention plans
Percent of respondents (n=91)



Key Takeaways

The majority of LHDs reported having a strategic plan in place that addressed a relevant topical area.

More medium and large LHDs reported having a strategic plans than small LHDs.

Over 40% reported at least some coordination within their agencies to develop written strategic plans.



Local Health Department Challenges

LHD respondents reported challenges faced in addressing ACEs, suicide, and overdose prevention. The most frequently identified challenges for:

- ACEs prevention efforts were **resources** (94%) and **competing priorities** (89%),
- Suicide prevention efforts were **resources** (92%) and **competing priorities** (84%),
- Overdose prevention efforts were **competing priorities** (89%) and **stigma** (83%).

Even the least identified challenges were selected by over half of respondents. The least frequently identified challenges for:

- ACEs prevention efforts were **stakeholder support and engagement** (58%),
- Suicide prevention efforts were **stakeholder support and engagement** (52%) and **internal coordination** (59%),
- Overdose prevention efforts were **communication across programs** (51%), **stakeholder support and engagement** (55%), **communication across sectors** (55%), and **internal coordination** (55%).

Differences in challenges identified across prevention areas:

LHDs reported greater challenges overall for their ACEs and suicide prevention efforts than for their overdose prevention efforts. The exceptions to this finding were equal **competing priorities** and **stakeholder support and engagement** challenges across efforts, and greater challenges with stigma in overdose efforts.

Differences in challenges identified by LHD size:

The percentage of respondents reporting each challenge by prevention area was relatively consistent across small, medium, and large LHDs. Large LHDs more commonly reported challenges with communication/messaging across programmatic areas and across state/local sectors than did medium or small LHDs for most prevention areas. For suicide and ACEs prevention, **subject matter expertise** challenges were inversely related to LHD size, with small LHDs more likely to report challenges in this area than large LHDs.

Key Takeaways

LHDs most frequently reported that lack of resources, competing priorities, and stigma posed challenges to suicide, overdose, and ACEs prevention efforts.

LHDs reported fewer barriers for overdose prevention efforts than ACEs or suicide.

Small, medium, and large LHDs reported similar challenges.



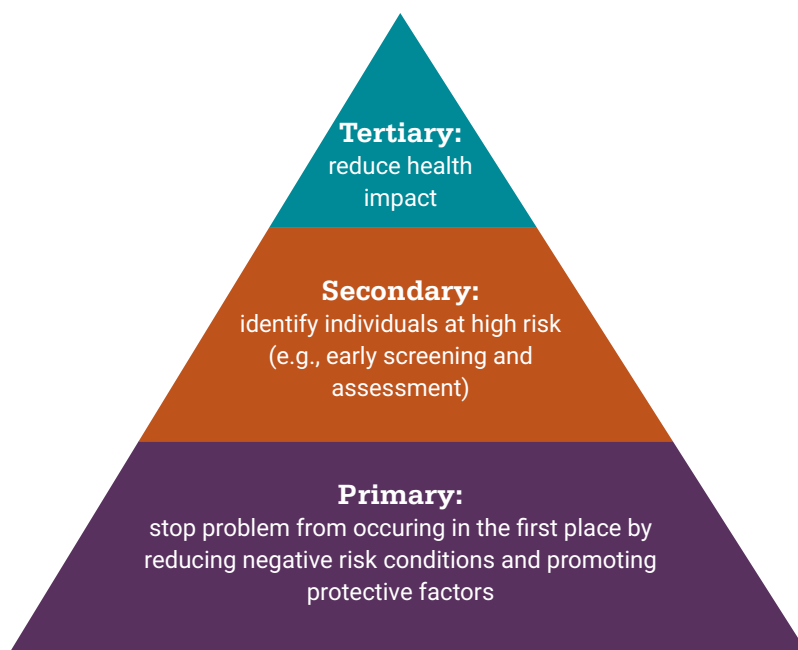
Topical Capacity

The Topical Capacity domain refers to multiple strategies that work together to form a comprehensive public health response. By understanding its current capacity to address these three areas of prevention, LHDs can create a roadmap to further enhance its capacity in the future. LHDs can build onto the existing skills and capacities of its workforce to successfully implement evidence-based public health approaches.

Evidence-based Practice

Evidence-based prevention strategies are practices, programs, and procedures that have proven effective through research and evaluation.

Figure 10: Levels of prevention





The prevention strategies identified in the SPACECAT were based on three prevention resources from the CDC:

Preventing Adverse Childhood Experiences (ACEs): [Leveraging the Best Available Evidence.](#)

Included strategies:

- Strengthen economic supports to families (e.g., paid family leave, subsidized child care, assisted housing mobility)
- Promote social norms that protect against violence and adversity (e.g., public education campaigns, bystander approaches, men and boys as allies)
- Ensure a strong start for children (e.g., early childhood home visitation, high-quality childcare, preschool environment with family engagement)
- Teach skills (e.g., social-emotional learning, healthy relationship skill programs, and parenting skills and family relationship approaches)
- Connect youth to caring adults and activities (e.g., mentoring programs and after-school programs)
- Intervene to lessen immediate and long-term harms (e.g., family-centered treatment, treatment to prevent problem behavior)

Preventing Suicide: [A Technical Package of Policy, Programs, and Practices.](#)

Included strategies:

- Strengthen economic supports (e.g., unemployment benefit programs)
- Strengthen access and delivery of suicide care (e.g., reduce provider shortages in underserved areas, mental health parity)
- Create protective environments (e.g., reducing access to lethal means among persons at risk of suicide)
- Promote connectedness (e.g., peer norm programs, community engagement)
- Teach coping and problem-solving skills (e.g., using social-emotional learning programs)
- Identify and support people at risk (e.g., crisis intervention)

Evidence-based Strategies for Preventing Opioid Overdose: [What's Working in the United States.](#)

Included strategies:

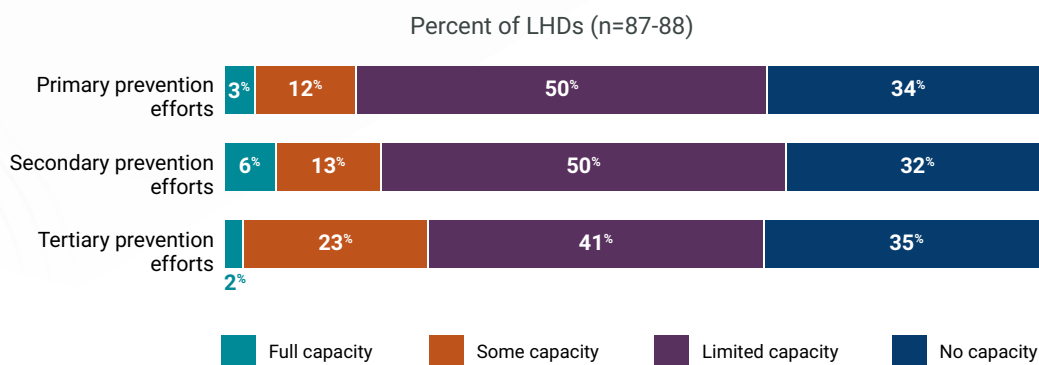
- Increase capacity of Medical Examiners/ Coroners/Toxicologists (e.g., training on standardization of drug-related death classification, increasing forensic workforce)
- Use Naloxone tracking and administration data to identify hot spots
- Collaborate with the hospital, healthcare, or emergency systems (e.g., access to timely data EHR/PDMP integration, E.D. data, EMS data; quality improvement initiatives, CDC guideline concordance)
- Support and educate public safety/first responders (e.g., training on Naloxone administration, Good Samaritan Laws, or substance use disorder)
- Implement mass media awareness campaigns
- Implement Prescription Drug Monitoring Programs
- Distribute Naloxone and provide overdose education
- Increase treatment access by working with health insurers/payers (e.g., removing prior authorization, lock-in programs, coverage of non-opioid pain management treatment)
- Support linkage to care (e.g., peer support, transportation, housing services)
- Expand access to substance use treatment (e.g., integrating Medications for Opioid Use Disorder (MOUD) into primary care, buprenorphine waiver, accessibility, co-locating treatment in high-risk settings)



Adverse Childhood Experiences (ACEs) Prevention

Among the LHD respondents, the majority acknowledged they have low capacity (no to limited capacity) to prevent ACEs via primary prevention efforts (84%), secondary prevention efforts (81%), and tertiary prevention efforts (75%). LHD respondents reported having the highest capacity (some to full capacity) in tertiary prevention efforts (25%).

Figure 11: Agency capacity to implement ACEs prevention efforts at each level of intervention



Of the ACEs prevention strategies, LHD respondents noted their highest and lowest capacity in providing the following activities:

Highest reported capacity (some to full capacity):

- Ensuring a strong start for children (37%)
- Teaching skills (35%)

Lowest reported capacity (no to limited capacity):

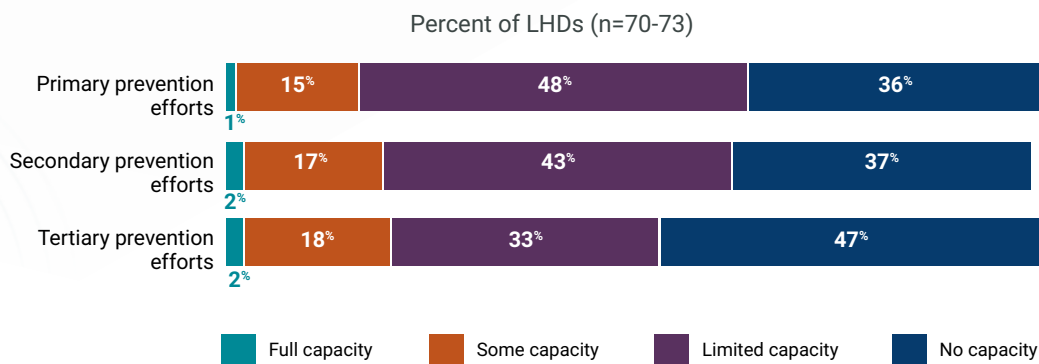
- Strengthening economic support to families through financial security and family-friendly work policies (95%)
- Intervening to lessen immediate and long-term harm (85%)



Suicide Prevention

Among the LHD respondents, the majority acknowledged they have low capacity (no to limited capacity) to prevent suicide via primary prevention efforts (84%), secondary prevention efforts (80%), and tertiary prevention efforts (80%). LHD respondents reported having highest capacity (some to full capacity) in secondary prevention efforts (20%) and tertiary prevention efforts (20%).

Figure 12: LHDs' self-reported level of capacity in addressing primary, secondary, and tertiary levels of suicide prevention



Of the suicide prevention strategies, LHD respondents noted their highest and lowest capacity in providing the following activities:

Highest reported capacity (some to full capacity):

- Identifying and supporting people at risk (25%)
- Lessening harms and preventing future risk (25%)

Lowest reported capacity (no to limited capacity):

- Strengthening economic support (94%)
- Strengthening access and delivery of suicide care (93%)
- Creating protective environments (93%)

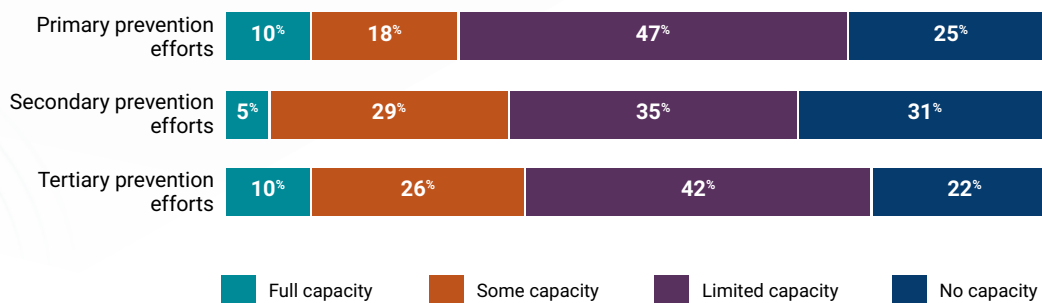


Overdose Prevention

Among the LHD respondents, the majority acknowledged they have low capacity (no to limited capacity) to prevent overdose across primary prevention efforts (72%). LHD respondents reported having highest capacity (some to full capacity) in secondary and tertiary prevention efforts (34% and 36%, respectively).

Figure 13: LHDs' self-reported level of capacity in addressing primary, secondary, and tertiary levels of overdose prevention

Percent of LHDs (n=72-75)



Of the overdose prevention strategies, LHD respondents noted their highest and lowest capacity in providing the following activities:

Highest reported capacity (some to full capacity):

- Supporting and educating public safety/first responders (45%)
- Distributing Naloxone and provide opioid overdose education (45%)
- Collaborating with hospital, healthcare, or emergency systems (37%)

Lowest reported capacity (no to limited capacity):

- Increasing treatment access by working with health insurers/payers (87%)
- Implementing Prescription Drug Monitoring Programs (80%)
- Expanding access to substance use treatment (76%)

Key Takeaways

LHDs reported higher capacity in more overdose prevention activities than activities in suicides and ACEs prevention.

LHDs reported the lowest capacity in suicide prevention activities.

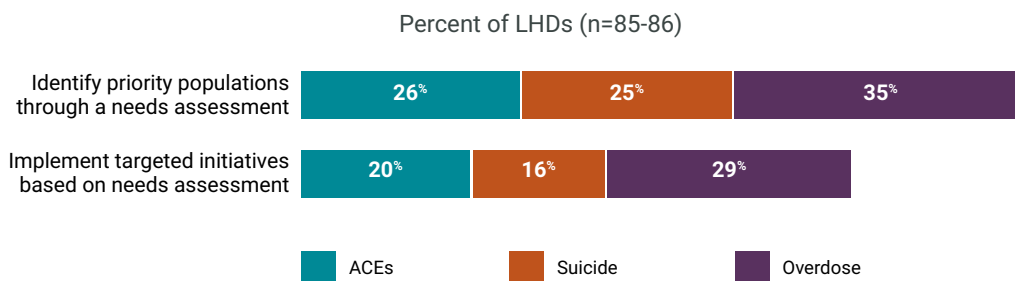


Health Disparities

CDC defines [health disparities](#) as “differences in health outcomes and their causes among groups of people.” For example, females and racial/ethnic minority groups are at a greater risk for experiencing ACEs and have been linked to increased risk for depression, asthma, cancer, and diabetes.

Prioritizing disproportionately affected communities requires needs assessments to inform efforts to 1) identify these communities and 2) implement targeted initiatives. Across ACEs, suicide, and overdose prevention efforts, 35% or fewer LHDs had some or full capacity to address health disparities using needs assessment. A slightly greater percentage of LHDs reported some or full capacity to identify priority populations than to implement targeted initiatives using needs assessments (Table 10). Consistent with other findings, LHDs were more likely to report a higher degree of capacity for overdose prevention efforts than for ACEs or suicide prevention efforts. This was also true for capacity to collaborate with justice systems and its involved populations (25% some or full capacity among overdose prevention efforts compared to 14% and 12% capacity among ACEs and suicide efforts, respectively).

Figure 14: Percent of respondents reporting some or full capacity to address health disparities using needs assessment by prevention area





Approximately 59% of LHDs reported at least sometimes incorporating the perspectives of people with lived experience for ACEs, 56% for suicide prevention, 64% for overdose prevention. A greater percentage of LHDs reported always incorporating lived experience for overdose prevention effort (17%) than for ACEs (7%) or suicide (9%) prevention efforts.

Just 21% of LHDs reported some or full capacity in their overdose prevention efforts to address health disparities among **individuals who had previously experienced an overdose**. Only 11% of LHDs reported some or full capacity to address the unique needs of these individuals for ACEs or overdose prevention efforts, respectively.

Only 8% of LHDs reported some or full capacity of suicide prevention efforts to address health disparities among **individuals with prior suicide attempts**. A similar percent of LHD overdose prevention efforts and smaller percent of ACEs prevention efforts had some or full capacity to address the unique needs of these individuals.

Key Takeaways

LHDs reported greater capacity to address health disparities through needs assessment and incorporating the lived experiences of affected individuals among overdose prevention efforts than ACEs and suicide prevention efforts.

Few LHDs reported capacity to address the unique needs of individuals who experienced overdose or had prior suicide attempts, even within their programs that specifically target overdose and suicide.



Workforce Capacity

Workforce capacity referred to the education and training of staff to prevent, identify, treat, and mitigate harms for ACEs, suicide, and overdose. As defined by the tool, workforce is comprised of 1) mental or behavioral health providers within the jurisdiction of the health agency, 2) providers external to the jurisdiction of the health agency, and 3) health agency staff. For the two provider groups, providers included social workers, peer support specialists, and other medical professionals.

Reported workforce capacity for each of several core workforce functions was low, with fewer than a third of LHDs reporting some or full capacity for overdose prevention efforts and fewer than a quarter reporting the same for ACEs and suicide prevention efforts. LHDs were more likely to report a higher degree of capacity for overdose prevention staff than for ACEs or suicide prevention staff.

LHDs consistently reported the least capacity to **strengthen the integration of behavioral/mental health and physical health care**, with some or full capacity reported by only 13% of LHDs for ACEs, 11% for suicide, and 19% for overdose prevention. ACEs and suicide prevention efforts reported the same areas of greatest workforce capacity, with approximately a quarter of respondents for ACEs and suicide prevention efforts reporting some or full capacity to **support providers in providing patient-centered care, giving referrals, and coordinating continuity of care** and to **train health agency staff in evidence-based prevention strategies**. For overdose prevention efforts, **supporting providers in identifying and reducing stigma** was the workforce function with the highest capacity, with approximately a third of LHDs reporting some or full capacity.

Key Takeaways

Overdose prevention efforts had some or full workforce capacity for a greater percentage of LHDs than ACEs or suicide prevention efforts

LHDs reported strengths in supporting providers, giving referrals, coordinating continuity of care, and training health agency staff in evidence-based prevention strategies

LHDs reported challenges in the integration of behavioral/mental health and physical health care

Conclusions

These findings begin to form an understanding about LHD capacity to prevent ACEs, suicide, and overdose by addressing the intersecting shared risk and protective factors. LHDs that participated in the national fielding of the tool demonstrated significant opportunities for improvement across the capacity domains of the SPACECAT.

LHDs reported facing many infrastructure-capacity related challenges in addressing ACEs, suicide, and overdose in their communities, including resources, competing priorities, and stigma. Key factors contributing to these factors may vary but could include insufficient resources, high demands, and the widening programmatic scope of LHDs.

Lack of Resources

Lack of resources (including both funding and staffing) were identified as a challenge by over 90% of LHDs. The impact of limited resources can cascade down. It can impede LHDs' capacity to develop mutually beneficial partnerships, apply for additional grant funding, and sustain impactful programming over time. Indeed, fewer than 40% of respondents reported sustained funding for ACEs, suicide, or overdose prevention efforts.

Similarly, competing priorities were identified as a challenge for nearly 90% of LHDs. This is consistent with other survey efforts of NACCHO's membership in recent years, particularly with the shift of time and resources to pandemic preparedness and response. For example, [NACCHO's 2020 Forces of Change](#) survey found LHDs suspended foundational public health services to reallocate capacity to critical frontline response for COVID-19, including 65% of LHDs reducing service provision for substance use prevention and 60% for maternal and child health. This has direct impact on capacity to implement overdose and ACEs prevention efforts, respectively. Further, while necessary, public health's embrace of a holistic approach that recognizes the need to address social determinants of health has broadened the scope of LHD's practice, which requires sufficient support and resources.



Overdose Prevention Efforts

While these challenges were reported across a broad range of LHDs, differences did emerge by prevention area and LHD size. **Overdose prevention efforts tend to be (1) better funded; (2) have greater capacity for collaboration, coordination, and addressing health disparities; and (3) have more workforce capacity than did ACEs and suicide prevention efforts.**

Possible reasons for these differences may include:

- **Time and Attention:** The overdose crisis has been at the forefront of our country's mind for over a decade thanks to media campaigns and government priority status.
- **Funding:** Federal agencies provide significant funding to tribal, and local health departments to enhance their capacity to implement overdose prevention strategies and programming.¹⁰
- **Simplicity:** Overdose prevention strategies and programming are more straightforward while suicide and ACEs prevention methods are complex and multifaceted.

Despite the greater availability of funding for overdose prevention efforts, the analysis demonstrates there are still disparities in terms of funding and capacity within overdose prevention efforts, to the benefit of medium and large LHDs. Greater funding may be contributing to more opportunities to partner, develop sustainable programming, and secure additional funding. In the national fielding, **over 75% of medium and large LHDs reported closely coordinating with critical partners in overdose prevention, but fewer than a third reported close coordination with partners in ACEs and suicide prevention efforts.** However, small LHDs reported equivalently low levels of coordination across all three prevention areas. A similar pattern emerged in LHDs reporting some or full capacity to collaborate with partners outside of the public sector (e.g., non-profit organizations, for-profit businesses, and the health system). It is possible that the disparities in funding between small and medium/large LHDs may contribute to the differences in LHDs' abilities to work collaboratively with partners.



Low Topical Capacity

Overall, a large portion of the LHD respondents reported they have limited or no capacity to provide primary, secondary, or tertiary prevention for either ACEs or suicide prevention, although LHDs did report higher capacity in several ACEs prevention activities than suicide prevention activities. Generally, there was higher reported capacity in primary, secondary, and tertiary prevention efforts for overdose prevention, particularly for specific activities such as Naloxone distribution and training.

Consistent with the higher resources and capacity of overdose prevention efforts, LHDs also reported greater capacity to address health disparities through needs assessment and incorporation of individuals with lived experiences in overdose prevention efforts than either ACEs or suicide prevention efforts.

Few LHDs reported capacity to address the unique needs of individuals who experienced overdose or had prior suicide attempts, even within the programs that specifically target overdose and suicide. Capacity to address the needs of those who previously experienced overdose was especially low for ACEs and suicide programming. The same was found for capacity to address the needs of those who previously attempted suicide in ACEs and overdose programs. Given the overlapping aspects of suicide, overdose, and ACEs, the fact that LHDs do not feel equipped to handle the intersecting issues is noteworthy.



Recommendations

Suicide, overdose, and ACEs are correlated and intertwined, and successful prevention strategies and programming likely necessitates a comprehensive public health approach that focuses upstream. This may feel difficult for LHDs to implement due to the significant amount of time, staffing, funding, and coordination required. The following recommendations are intended as starting points for LHDs who are inventorying their current capacity and considering how to allocate resources to target this critical public health issue.

Increasing Collaboration Across Prevention Areas

While the broadening scope of LHDs' responsibilities may place pressure on already limited resources, it also presents an opportunity for collaboration across prevention areas, particularly for closely intertwined health issues such as ACEs, suicide, and overdose. For example, issues such as childhood abuse and neglect are both ACEs and risk factors for suicide and substance use¹⁻⁴. Yet, LHDs indicated extremely limited capacity to address shared risk and protective factors for ACEs, suicide, and overdose.

Increased coordination and resource pooling could be a promising strategy because LHDs demonstrated a strong capacity for collaboration and coordination with different partners. This approach could be particularly helpful for small LHDs. Small LHDs tended to have lower staffing and were less likely to have developed topic-specific strategic plans than large LHDs; for those who did have strategic plans, risk and protective factors were the least frequently addressed topical areas. **Increased interagency and external partner coordination could assist in strengthening suicide, overdose, and ACEs programs.**

Collaboration should also include shared data and analyses, fewer than 15% of respondents indicated they use surveillance data to address the intersection of ACEs, suicide, and overdose prevention.

Leveraging Capacity in Overdose Prevention

As noted above, there is currently more federal funding allocated to LHDs to implement overdose prevention than ACEs or suicide prevention activities, and LHD respondents generally reported the highest capacity across capacity domains in overdose prevention.

The underlying shared risk and protective factors between ACEs, suicide, and overdose prevention present an opportunity to address all three areas together through resource sharing and cross-cutting evidence-based initiatives. This can be achieved by:

- Creating a strategic plan within the three programs for how each of the three issues can be addressed within current activities;
- Engaging in a shared plan amongst those who work in ACEs, suicide, and overdose prevention; and
- Incorporating elements of ACEs and suicide prevention into overdose prevention programming that address these interrelated issues to promote resource sharing (e.g., substance use interventions that also take an intergenerational, preventive approach with youth).



Considering Both Upstream and Downstream Approaches

The Topical Capacity section of our analysis indicates that the LHD respondents feel they have more capacity in secondary and tertiary prevention strategies than in primary prevention strategies. It is possible that primary prevention feels like a daunting task, particularly with the many, multifaceted variables that drive suicide, overdose, and ACEs. LHDs may not know where to begin, or they may not be familiar with relevant resources or evidence-based strategies.

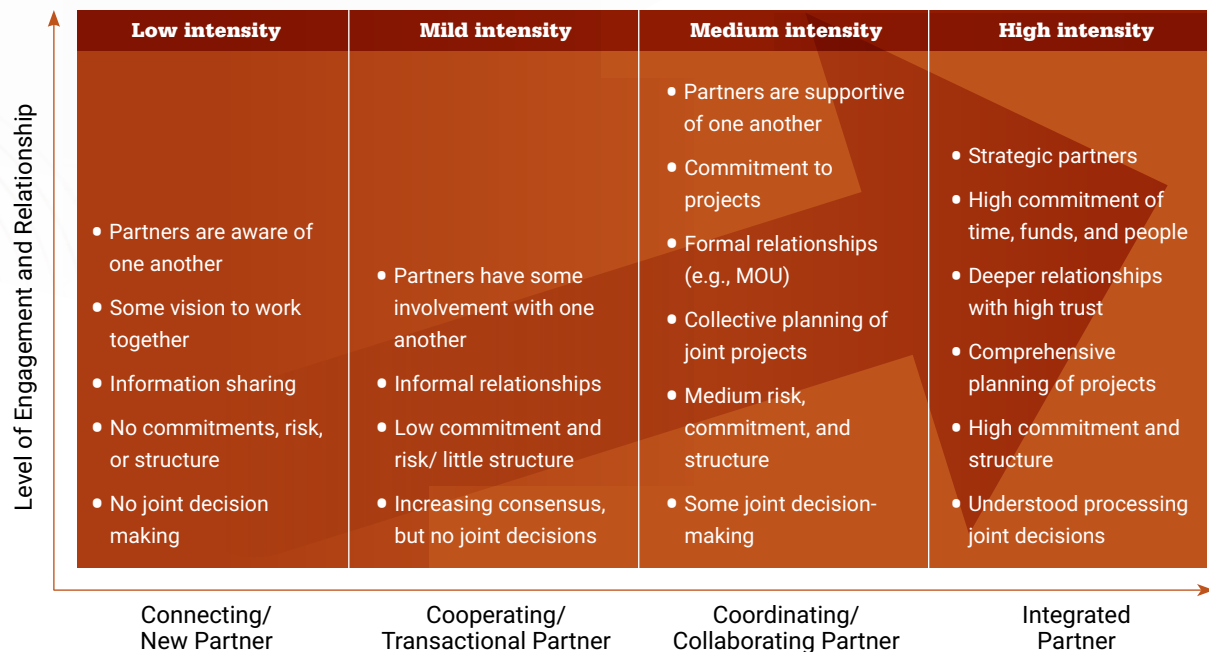
We recommend that LHDs assess their barriers to engaging in primary prevention strategies and develop targeted plans to dismantle them. Primary, secondary, and tertiary prevention is needed to address both upstream and downstream factors contributing to ACEs, suicide, and overdose prevention.

For example, the highest capacity areas in overdose prevention were tertiary prevention activities, including naloxone training and naloxone distribution. To broaden their approach to include primary overdose prevention, LHDs could collect data on ACEs, a risk factor for both suicide and overdose. Using data to identify those who experience ACEs early provides an opportunity to improve primary prevention efforts for both overdose and suicide and to bolster secondary and tertiary ACEs prevention.

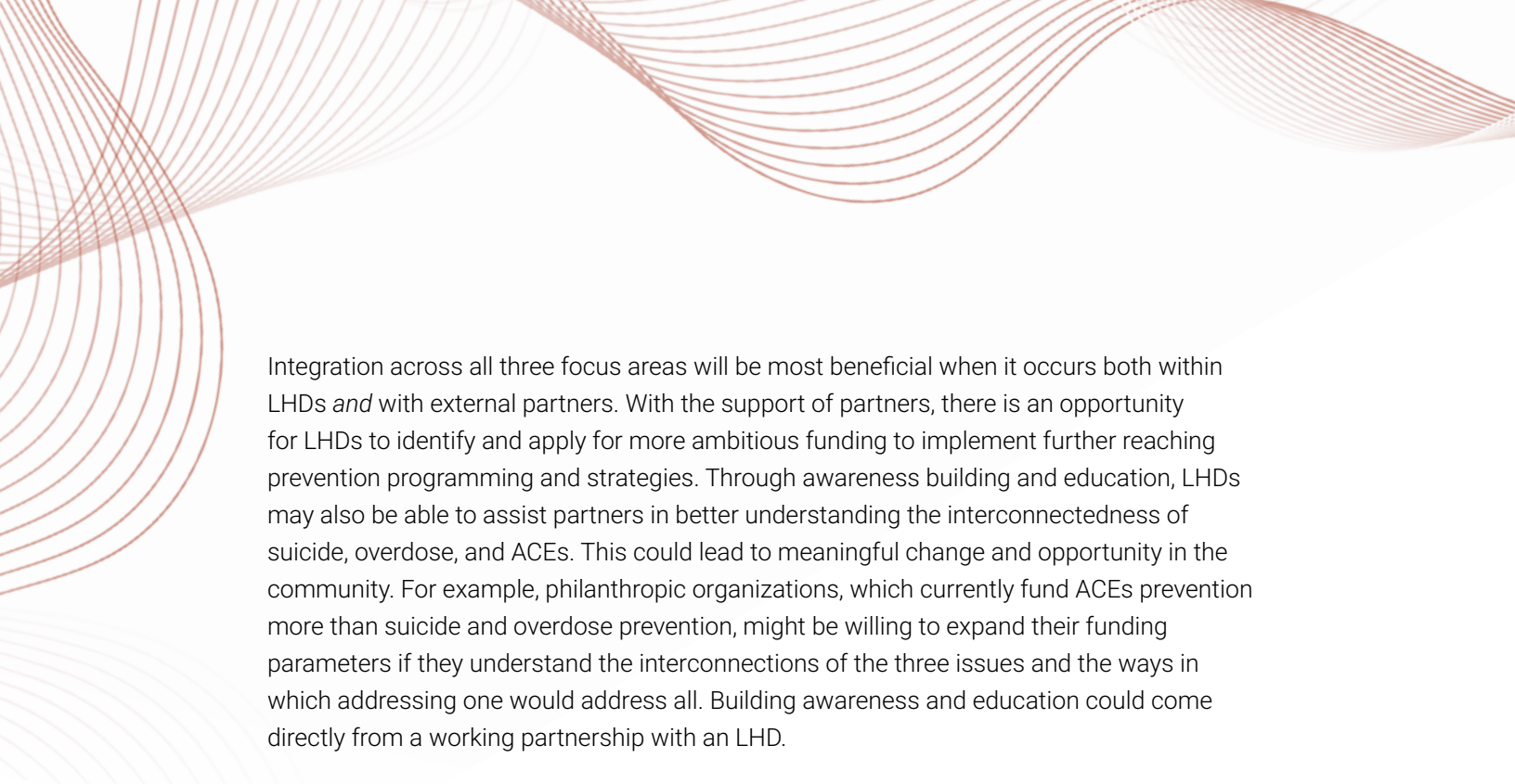
Establishing Partnerships and Funding

About half of LHD respondents reported established partnerships with partners with the public sector at their jurisdictional level, across different jurisdictional levels, and within the private sector. We recommend LHDs **identify current and potential partnerships and determine current and desired level of partnership:**¹²

Adapted from Finerty, 2012; Johnson, 2011; Synergy Commons, 2015



- **Connection:** LHDs speak with these partners who do similar work and provide information updating each other on their work.
- **Cooperation:** LHDs support this partners' work with no formal agreement in place.
- **Collaboration:** LHDs work with these partners on certain projects and initiatives.
- **Integration:** LHDs have a formal agreement in place with these partners to engage in shared planning and execute a workplan with each other.



Integration across all three focus areas will be most beneficial when it occurs both within LHDs *and* with external partners. With the support of partners, there is an opportunity for LHDs to identify and apply for more ambitious funding to implement further reaching prevention programming and strategies. Through awareness building and education, LHDs may also be able to assist partners in better understanding the interconnectedness of suicide, overdose, and ACEs. This could lead to meaningful change and opportunity in the community. For example, philanthropic organizations, which currently fund ACEs prevention more than suicide and overdose prevention, might be willing to expand their funding parameters if they understand the interconnections of the three issues and the ways in which addressing one would address all. Building awareness and education could come directly from a working partnership with an LHD.

Incorporating Staff with Lived Experiences

Lived experience is a term used to describe an individual's first-hand knowledge and understanding of a certain experience. Individuals with lived experience provide immense value to ACEs, suicide, and overdose prevention due to their understanding of the human experiences, choices, and challenges present in the experience of these issues.¹³ The perspectives of people with lived experiences are essential to informing programmatic decisions and providing an empathic approach. Therefore, **we recommend LHDs employ staff with lived experience in the areas of suicide, overdose, and ACEs.** There are toolkits for how to successfully recruit and employ staff with lived experience, including the [Toolkit for Employing Individuals with Lived Experience Within the Public Mental Health Workforce](#) and [Successful Approaches to Employing Individuals with Lived Experience in the Criminal Justice and Behavioral Health Fields](#).

Funding Further Research

Finally, **we recommend LHDs support and develop opportunities to collect and analyze the intersection between ACEs, suicide, and overdose within their local communities.** These data can help demonstrate which populations benefit from an intersectional approach to these three issues, and why such an approach works. Armed with this information, LHDs can make informed decisions about the best interventions to target their communities' unique need and reach those who are at the highest risk for suicide, overdose, and ACEs.

Citations

1. ACEs, Overdose and Suicide. American Public Health Association. <https://www.apha.org/topics-and-issues/ace-overdose-and-suicide>. Accessed July 8, 2022.
2. Hughes K, Bellis MA, Hardcastle KA, et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*. 2017;2(8):e356-e366. doi:10.1016/S2468-2667(17)30118-4.
3. Stein MD, Conti MT, Kenney S, et al. Adverse childhood experience effects on opioid use initiation, injection drug use, and overdose among persons with opioid use disorder. *Drug and Alcohol Dependence*. 2017;179:325-329. doi:10.1016/j.drugalcdep.2017.07.007
4. Ports KA, Merrick MT, Stone DM, et al. Adverse Childhood Experiences and Suicide Risk: Toward Comprehensive Prevention. *Am J Prev Med*. 2017;53(3):400-403. doi:10.1016/j.amepre.2017.03.015.
5. Adverse childhood experiences (ACEs): Preventing early trauma to improve adult health. Centers for Disease Control and Prevention. November 5, 2019. Accessed July 11, 2022.
6. Hillis S, Blenkinsop A, Villaveces A, et al. COVID-19-associated orphanhood and caregiver death in the United States. *Pediatrics*. 2021;148(6): e2021053760. <https://doi.org/10.1542/peds.2021-053760>
7. Richesson D, Hoening JM. Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health. Substance Abuse and Mental Health Services Administration (SAMHSA). October 2021. Accessed July 8, 2022. <https://www.samhsa.gov/data/sites/default/files/reports/rpt35325/NSDUHFRPDFWHTMLFiles2020/2020NSDUHFR1PDFW102121.pdf>
8. Ehlman DC, Yard E, Stone DM, Jones CM, Mack KA. Changes in Suicide Rates — United States, 2019 and 2020. *MMWR Morb Mortal Wkly Rep* 2022;71:306–312. DOI: <http://dx.doi.org/10.15585/mmwr.mm7108a5externalicon>
9. CDC Wonder. Centers for Disease Control and Prevention. March 14, 2022. Accessed July 8, 2022.
10. Standards & Measures. Public Health Accreditation Board. December 2013. Accessed July 12, 2022.
11. NCIPC Opioid Funding. Centers for Disease Control and Prevention: Injury Prevention & Control. January 28, 2022. Accessed July 12, 2022.
12. Prevention Collaboration in Action: Levels of Collaboration. Education Development Center. Accessed July 12, 2022.
13. Skelton-Wilson S, Sandoval-Lunn M, Zhang X, et al. Methods and Emerging Strategies to Engage People with Lived Experience. United States Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. December 20, 2021. Accessed July 13, 2022.

Appendix A. Link to SPACECAT

[Suicide, Overdose, and Adverse
Childhood Experiences Prevention
Capacity Assessment Tool
\(SPACECAT\)](#)

Appendix B. Some or full capacity to address risk and protective factors in prevention areas

Percent of respondents (n=95–98)

