Landscape Study of

Application Software Products That Aim to Address the Mental Health Needs of Law Enforcement Officers



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This report builds on research aimed at understanding mental health needs and interventions related to law enforcement and research that explores the general use of apps as a delivery method for therapeutic modalities. However, this report acknowledges a gap in research on the efficacy of mental health apps specifically targeted to law enforcement. Therefore, CJTEC is unable to comment on the effectiveness of these mental health apps in maintaining or improving mental health among law enforcement personnel.

This report was authored primarily by RTI International's Innovation Advisors—Matthew Mecray, Rebecca Shute, and Blaide Woodburn—with support from Molly O'Donovan Dix and Kristina Cooley, as well as RTI's Applied Justice Research Division—Michael Planty, Renee Mitchell, Jenn Rineer, Meret Hofer, and Jeri Ropero-Miller.

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Thank you to the various criminal justice community stakeholders and practitioners who provided insights and expertise.

Interviews with numerous subject matter experts and end users (some listed below) helped to frame issues within the law enforcement community, consider technology-enabled strategies to address officer health and wellness challenges, and deliver key insights for decision-makers interested in implementing mental health application software products. CJTEC benefitted from feedback from various stakeholders, including police chiefs and law enforcement end users, vendors, and researchers, to understand the value of mental health apps and the practical implications of their adoption and use.

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Criminal Justice Testing and Evaluation Consortium (CJTEC)

CJTEC is a program of the National Institute of Justice (NIJ), which uses research-based methodologies to enhance the capabilities of law enforcement, courts, and corrections agencies. As a consortium, CJTEC leverages expertise from varied criminal justice community stakeholders to understand and test technologies and practices in a variety of NIJ's research areas.



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RTI leads CJTEC. CJTEC leverages RTI's expertise in criminal justice, forensic science, innovation, technology application, economics, data analytics, statistics, program evaluation, public health, and information science.



Landscape Research Methodology

This report consolidates available information regarding law enforcement–specific mental health and wellness applications, enabling agencies to better understand the types of applications that are available, features, benefits, potential drawbacks, and considerations for how to effectively implement mental health apps within law enforcement organizations.

To conduct this study, CJTEC used the following iterative process:

- 1. Scanned extant literature:
 - Consulted secondary sources, including policing research and product white papers, to
 understand the current mental health and wellness needs within policing and how wellness
 applications might help address unmet needs. Search criteria included on-market, commercially
 available or downloadable products (available on the website, Google Play, or Apple App Store)
 that were specifically created for law enforcement end users for mental health and wellness
 purposes.
- 2. Consulted with experts, practitioners, and other key stakeholders:
 - Interviewed experts and end users about the current state of mental health and wellness in policing, gaps in current approaches, and the value of implementing wellness applications; these interviewees included decision-makers in law enforcement agencies. Agencies who have currently adopted these apps were identified through CJTEC network connections, connections from vendors, and public domain knowledge of an agency's use of an app (e.g., news articles).
 - Additionally, the International Association of Chiefs of Police (IACP) 2021 Officer Safety and Wellness Symposium provided insights into unmet needs and areas where wellness applications could provide value to the policing community.
- 3. Solicited market input for products:
 - Created a <u>Request for Information (RFI)</u> on the Federal Register to solicit input from companies and researchers developing products in this field.
 - Reached out to vendors to understand their product offerings, typical customers, and product value-adding features.
- 4. Consolidated and synthesized information:
 - Synthesized and analyzed the offerings of various health and wellness applications.
 - Summarized RFI responses, market information, and primary interviews to compare commercially available mental health and wellness applications.
- 5. Provided case examples:
 - Built case studies based on the experiences of real agencies selecting and implementing application software that address mental health needs of law enforcement.

Based on the steps taken above, nine apps were identified for inclusion in this report. Although this was a good faith effort to identify all relevant vendors at the time of publication, it is possible that additional eligible application software targeted to law enforcement mental health exists.



EXECUTIVE SUMMARY

This landscape study of application software products focuses on products that address the mental health needs of law enforcement.

Increasing societal awareness of the adverse impacts of mental health stressors on individuals has driven organizations of all types, including law enforcement agencies, to consider mental health as a facet of holistic occupational health. It is well documented that law enforcement officers frequently experience work-related stressors and high-stress traumatic events that can have serious adverse consequences for their mental health and overall wellness. Such deterioration in mental health, in turn, may subsequently lead to poor decision-making and performance. As such, law enforcement agencies have become increasingly interested in supporting the mental health needs of their officers to benefit individual well-being, enhance agency functioning, and improve law enforcement–public contact. Yet, despite the growing recognition that officers are at high risk for poor mental health due to occupational stress, many barriers prevent them from accessing and engaging mental health services, including the lack of available resources, the perceived inaccessibility of such resources, and stigma. In response, law enforcement agencies are increasingly relying on application software products, or "apps"—including those available as a native or a web-based app—to aggregate mental health resources for their officers in a confidential and easily accessible manner.

The objective of this report is to inform law enforcement stakeholders of mental health-focused apps that are currently available, what they offer their users, their limitations, and what should be considered in implementing them within law enforcement agencies. This study may also provide value to wellness coordinators, police foundation executive boards, unions, clinicians working with law enforcement agencies, and funding agencies. The report leverages interviews with agencies who are "early adopters" of mental health apps (who publicly acknowledge agency usage of these apps), feedback from the app developers, and the technical knowledge of mental health experts with experience in app testing and implementation. The report provides detailed product information from vendors that create apps specifically for law enforcement mental health needs, though this is not an exhaustive landscape study. The vendors featured in this document responded to CJTEC's requests for information, and responses to the Federal Register Request for Information developed for this study demonstrate that this effort was methodical and exhaustive.

This landscape study fills an obvious void. To my knowledge, no other study exists that explores the nascent deployment of mental health applications in law enforcement. By breaking ground in this area, it may prompt future inquiries into this burgeoning area of law enforcement mental health research.

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Enforcement INSIGHT

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Key Findings

CJTEC investigated on-market mental health apps created specifically for law enforcement end users, spoke with agencies that currently use mental health apps, and consulted experts on policing and mental health and found the following:

Apps offer a new tool:

Law enforcement–focused mental health apps serve as a novel delivery method that aggregates multiple existing mental health supports. These apps may help direct officers to resources such as trained therapists; however, the app itself does not diagnose or treat mental health conditions.

■ Little focus on law enforcement users:

Few application software products exist specifically to address the mental health needs of law enforcement personnel. For inclusion in the report, CJTEC considered both native apps and webbased apps that could be accessed from a mobile device. These products differ from other agency-delivered offerings in that officers can engage with multiple resources confidentially, 24/7, even when they are outside the agency network.

Descriptive but not prescriptive:

Although the apps profiled in the report may suggest potentially useful resources based on an officer's interaction with the app, they lack the ability to "prescribe" the most appropriate mental health intervention or resource. Rather, they facilitate access to a variety of mental health options available to officers.

Similar offerings yet varied pricing:

Many of the mental health apps profiled in this report share common offerings, such as self-help resources, access to peer support groups, links to mental health counselors, self-assessments, connections to national hotlines, and physical and financial wellness tools. However, the apps varied widely in price and price model, ranging from no cost to tens of thousands of dollars for a 100-person agency.

Clinical evidence is lacking:

Although many law enforcement–focused app companies aim to enhance engagement by aggregating multiple resources in one place, no scientific evidence demonstrates that this delivery method provides value in the law enforcement context. This report does not comment on the effectiveness and clinical impact of the resources contained within a particular app. However, anecdotal evidence indicates value in terms of the convenience and ease of use of apps.

■ Fostering holistic wellness:

Although implementing a mental health app likely can help foster a culture of holistic wellness across an agency, little to no scientific data can support that mental health apps improve mental health outcomes for law enforcement agencies and officers.

Confidentiality matters:

Mental health apps are available via enterprise pricing models, and anonymous data may be collected for app development. Although officer-level data are typically not shared, anonymous, aggregate data may be shared with agencies to understand how often the apps are being used and which resources within the apps receive the most visits. Although this feature may limit the ability to use apps as an "early warning system," it offers a level of confidentiality that may alleviate officers' privacy concerns when using the app.



This report overviews nine digital mental health applications and their capabilities, limitations, and implementation considerations.

This report aggregates information on the range of available apps and considerations for agencies seeking to adopt mental health app solutions for their officers. As illustrated in **Figure 1**, we profiled application software products for mental health apps developed and targeted specifically to sworn law enforcement officers (though they may be accessible to all law enforcement personnel).

	Mental Health Application Software Products Overviewed in This Report							
	Product and Associated Company	Native App	Web- Based App	Company Description				
	Cordico Shield (Cordico)	χ		Cordico Shield is an officer wellness application that serves as a robust resource hub for officers to build and maintain mental resilience.				
	Lighthouse Health & Wellness (Apex Mobile/100 Club)	Х		The Lighthouse Health & Wellness program provides first responders with anonymous and confidential access to health and wellness resources developed specifically for public safety agencies.				
	MindBase (MindBase)	Х	Х	MindBase is a data-driven, computer-aided platform that integrates with an organization's dispatch system to identify and engage with employees who have responded to critical situations.				
National	mResilience (TIAG)	Х		mResilence is a first responder wellness application that aims to improve mental and physical health of first responders by taking a proactive "prehab not rehab" approach.				
ž	ResponderRel8 (iRel8/All Clear Foundation)	Х		ResponderRel8 is a first responder wellness application that facilitates meaningful, yet anonymous, peer-to-peer connections.				
	WeNeverWalkAlone (Velan Solutions)	Х	Х	WeNeverWalkAlone is a nationwide, trained peer support and vetted mental health professional network that connects law enforcement departments that have peer support programs to increase anonymity and reduce stigma in seeking support.				
	YOU ResponderStrong (Grit Digital Health/All Clear Foundation)		Х	YOU ResponderStrong is a confidential web-based digital wellness platform with hundreds of evidence-based resources and tools to support responders, health care workers, and their loved ones with their well-being.				
ecific	Bulletproof (Apex Mobile/100 Club)	Х		Bulletproof is a robust resource hub that takes a holistic approach to helping law enforcement build and maintain overall wellness.				
State-Specific	WILE Guardian (Wisconsin Law Enforcement Death Response [LEDR] Team)	Х		WILE Guardian is a free native mobile application that serves as a resource hub for sworn and nonsworn law enforcement officers in the state of Wisconsin and selected surrounding states.				

Figure 1: This landscape study profiles nine mental health apps, which are accessible via native apps or the web.



CONTEXT

The law enforcement profession places significant demands on officers' mental health, but officers may not readily use mental health services.

The occupational strains associated with policing place many demands on the mental health of officers and can include significant chronic stressors and acute traumatic experiences, with collateral effects on personal and organizational functioning.^{1,2} Officers are more likely to experience a broad range of adverse mental health consequences such as higher incidences of post-traumatic stress disorder (PTSD), anxiety, depression, and substance use. Moreover, officers are also at higher risk for physical health problems and early death than the general public and are more likely to die by suicide.^{3,4,5,6,7}

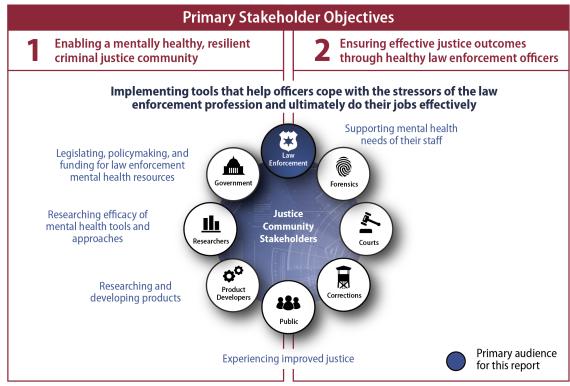


Figure 2: Policymakers, researchers, product developers, and agencies are working to provide tools to improve officers' mental health.

^{1.} Drew, J. M., & Martin, S. (2021). A national study of police mental health in the USA: Stigma, mental health and help-seeking behaviors. *Journal of Police and Criminal Psychology*, 36, 295–306. https://doi.org/10.1007/s11896-020-09424-9

^{2.} Richards, N. K., Suarez, E. B., & Arocha, J. F. (2021). Law enforcement officers' barriers to seeking mental health services: A scoping review. *Journal of Police and Criminal Psychology*, *36*, 351–359. https://doi.org/10.1007/s11896-021-09454-x

^{3.} Gershon, R. R., Barocas, B., Canton, A. N., Li, X., & Vlahov, D. (2008). Mental, physical, and behavioral outcomes associated with perceived work stress in police officers. Criminal Justice and Behavior, 36(3), 275–289. https://doi.org/10.1177%2F0093854808330015

^{4.} Liberman, A. M., Best, S. R., Metzler, T. J., Fagan, J. A., Weiss, D. S., & Marmar, C. R. (2002). Routine occupational stress and psychological distress in police. Policing: An International Journal, 25(2), 421–441. https://www.emerald.com/insight/content/doi/10.1108/13639510210429446/full/html

s. Maguen, S., Metzler, T. J., McCaslin, S. E., Inslicht, S. S., Henn-Haase, C., Neylan, T. C., & Marmar, C. R. (2014). Routine work environment stress and PTSD symptoms in police officers. *The Journal of Nervous and Mental Disease*, 197(10), 754–760. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3974929/

Gershon, R. R., & Li, X. (2002). Work stress in aging police officers. Journal of Occupational and Environmental Medicine, 44(2), 160–167. https://pubmed.ncbi.nlm.nih.gov/11851217/

 ⁻Jetelina, K. K., Molsberry, R. J., & Gonzalez, J. R. (2020). Prevalence of mental illness and mental health care use among police officers. JAMA Network Open, 3(10), 1–12. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2771400?utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_term=100720



Although law enforcement officers are at high risk for occupational stressors and related deteriorations in mental health, they are likely to underuse voluntary mental health–related services (though they may at times be mandated to mental health interventions after a critical incident). Fostering a culture of mentally healthy law enforcement is a shared duty across the justice community (as illustrated in Figure 2).

Barriers to using mental health services may include logistical concerns related to the availability of services, scheduling and financial requirements, and wider issues related to the knowledge of or perceived accessibility of available services, as well as the negative impact of mental health stigma.^{8,9}

Officers may be reluctant to access services because of concerns about being labeled as weak or unfit for duty, or they may fear negative professional consequences related to perceived mental health struggles. Collectively, questions related to the availability and accessibility of services significantly reduce the likelihood that officers in need will seek and access the appropriate services.

A growing number of studies have evaluated the ability of application software, referred to as "apps," to help manage various aspects of mental health.¹⁰ Although these apps and the associated research are still emerging, current data support the effectiveness of employing smartphone or mobile apps to access psychological interventions to manage mental health conditions such as stress, anxiety, depression, and PTSD among the general public.^{11,12,13} For example, one randomized controlled trial among military service members found that participants using apps that promoted psychoeducation, social engagement, and relaxation demonstrated increased resilience by reducing PTSD, stress, and depression symptoms over a 6-week period. 14 Additionally, a range of studies have examined the efficacy of administering specific types of therapeutic modalities via apps. For example, apps that administered cognitive behavioral therapy, a therapeutic approach that is generally shown to be well received among law enforcement, 15 were effective compared with controls, though their overall impact may depend on the level of engagement with the app. 16 It is notable, however, that the literature on the efficacy of mobile apps for administering psychological interventions is mixed because most commercially available apps are not supported by robust evidence. For example, over two-thirds of landscaped commercial anxiety apps lacked clinician involvement during their development, and few had been rigorously tested. 17 This may limit the ability to create tools that are truly effective and value-adding.

- Box Drew, J. M., & Martin, S. (2021). A national study of police mental health in the USA: Stigma, mental health and help-seeking behaviors. Journal of Police and Criminal Psychology, 36, 295–306. https://doi.org/10.1007/s11896-020-09424-9
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- Rathbone, A. L., & Prescott, J. (2017). The use of mobile apps and SMS messaging as physical and mental health interventions: Systematic review. Journal of Medical Internet Research, 19, 8. https://doi.org/10.2196/jmir.7740
- 11. Wang, K., Varma, D. S., & Prosperi, M. (2018). A systematic review of the effectiveness of mobile apps for monitoring and management of mental health symptoms or disorders. *Journal of Psychiatric Research*, 107, 73–78. https://pubmed.ncbi.nlm.nih.gov/30347316/
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- 15. Becker, C. B., Meyer, G., Price, J. S., Graham, M. M., Arsena, A., Armstrong, D. A., & Ramon, E. (2009). Law enforcement preferences for PTSD treatment and crisis management alternatives. *Behaviour Research and Therapy*, 47(3), 245–253. https://doi.org/10.1016/j.brat.2009.01.001
- 16. Rathbone, AL, Clarry, L, & Prescott, J. (2017). Assessing the efficacy of mobile health apps using the basic principles of cognitive behavioral therapy: Systematic review. Journal of Medical Internet Research, 19(11), e399. https://doi.org/10.2196/jmir.8598
- 17. Sucala, M., Cuijpers, P., Muench, F., Cardos, R., Soflau, R., Dobrean, A., Achimas-Cadariu, P., & David, D. (2017). Anxiety: There is an app for that. A systematic review of anxiety apps. Depression and Anxiety, 34(6), 518–525. https://doi.org/10.1002/da.22654



Emerging evidence suggests that application software (accessed via mobile devices) may be an effective psychological intervention.

Taken together, the evidence suggests that apps may be a useful tool in managing various aspects of mental health among the public, particularly when an intervention is developed and implemented according to the evidence base. Although the research examining app-based psychological interventions continues to grow, the promise of recent findings among the public has inspired app developers to create apps focused on high-stress occupations such as law enforcement, front-line health care workers, ¹⁸ and emergency medical services. ¹⁹ Yet, although this method for delivering mental health resources to law enforcement is beginning to be implemented across the country, no research has examined its utility in this population.

Given the acute mental health needs of officers and the far-reaching consequences of poor mental health not just on officers, but also on their organizations and the public, law enforcement agencies have a great interest in ensuring the mental well-being of their officers. Agency-provided mental health resources—such as access to trained therapists, peer support groups, and helpful literature and videos—may help officers manage their mental health,²⁰ but these resources can vary significantly across jurisdictions.²¹ While some agencies offer a broad variety of mental health resources through their insurance provider or employee assistance program (EAP), other jurisdictions may only offer limited services because of budgetary constraints, lack of awareness of mental health resource options, or continued stigma. One emerging approach for improving the availability and accessibility of mental health resources for law enforcement officers is the use of self-administered application software products that deliver mental health resources tailored to the law enforcement community. These apps help officers access a wide range of resources from a mobile device in a private and convenient manner. For the general public, thousands of mental health-related apps are available, though perhaps only a small number are widely known or used.²² A much smaller number of product developers have created products targeted to law enforcement officers, which some law enforcement agencies have adopted as part of their comprehensive wellness strategies.

Golden, E. A., Zweig, M., Danieletto, M., Landell, K., Nadkarni, G., Bottinger, E., Katz, L., Somarriba, R., Sharma, V., Katz, CL, Marin, D. B., DePierro, J., & Charney, D. S. (2021). A resilience-building app to support the mental health of health care workers in the COVID-19 era: Design process, distribution, and evaluation. *JMIR Formative Research*, 5(5), e26590. https://doi.org/10.2196/26590

Vilendrer, S., Amano, A., Brown Johnson, C. G., Favet, M., Safaeinili, N., Villasenor, J., Shaw, J. G., Hertelendy, A. J., Asch, S. M., & Mahoney, M. (2021). An app-based intervention to support first responders and essential workers during the COVID-19 pandemic: Needs assessment and mixed methods implementation study. *Journal of Medical Internet Research*, 23(5), e26573. https://doi.org/10.2196/26573

^{20.} Although this report notes some mental health resources commonly offered by agencies, it does not make claims on the effectiveness or value of these resources for the law enforcement community.

^{21.} Copple, C., Copple, J., Drake, J., Joyce, N., Robinson, M.-J., Smoot, S., Stephens, D., & Villaseñor, R. (2019). Law enforcement mental health and wellness programs: Eleven case studies. Office of Community Oriented Policing Services. https://cops.usdoj.gov/RIC/Publications/cops-p371-pub.pdf

^{22.} The One Mind PsyberGuide and MIND, the M-Health Index and Navigation Database are professional resources providing extensive coverage and insights into these wide-ranging mental health mobile apps available to both individual consumers and organizations.



Application Software Covered in This CJTEC Report

Incl	uded in This Landscape Study		Not Included
	Native Applications	Web-Based Applications	Other Digital Resources
Access	Access via app downloaded on the user's mobile device	• Access via web browser (e.g., Safari or Chrome)	This report does not address digital resources accessed through a web browser that are static and offer
Interaction	 "Two-way information feeds," where user can interact with the site Interaction with mobile device features (e.g., camera, GPS, microphone) 	 "Two-way information feeds," where user can interact with the site App may interact with device features 	limited user interaction (e.g., sites without dashboards or ways to save important information for easy access). These digital resources are typically inaccessible without an Internet connection and may not be optimized for viewing on mobile devices.
Push Notifications	Can send push notifications to the user	May be capable of sending push notifications to the user	devices.
Internet Connection	Some content available without internet connection	Internet connection needed	

Figure 3: CJTEC profiled vendors who created native apps or web-based apps specifically for law enforcement use.

Although other digital resources, such as web page–based resource centers or specific tools (e.g., meditation apps) may provide similar services, this report strictly overviews apps for law enforcement. The products profiled in the report met the following criteria:

- The product was specifically developed for law enforcement and is available as an enterprise model that can be disseminated across an agency.
- Officers can interact with the resources within a tool (e.g., they can "pin" a resource for easy access, or the app recommends additional resources based on previous activity).
- The product was optimized for mobile phone or tablet use as a native or web-based application.

Specifically, for inclusion in the landscape study, CJTEC considered application software products encompassing "native apps" (i.e., those installed as apps on a mobile device and can use the full functionality of the device) and web-based apps (i.e., those accessible through a browser without needing to download software). Figure 3 provides more information about how CJTEC defined "native apps" and "web-based apps" and how they differ from other digital resources. Although similar to other digital resources such as web page articles and books, for instance, web-based apps offer more functionality and the ability to interact in a personalized manner, similar to native apps. For the purposes of this report, we refer to native apps and web-based apps collectively as "apps." Apps may be configured to align with or augment resources that the agency provides via other services, such as an EAP (e.g., the agency may be able to add resources created specifically for their agency). Agencies should consider that other methods to centralize resources may offer similar benefits as apps.



PRODUCT LANDSCAPE

Mental health apps for law enforcement typically aggregate and deliver existing mental health resources.

Mental health apps serve as one of many ways law enforcement agencies can offer mental health resources to their officers. Typically, the apps are used to complement the existing efforts of agencies to eliminate potential barriers to service utilization (e.g., concerns about confidentiality, lack of knowledge about services). For example, many law enforcement agencies already offer EAPs; mental health counseling through agencies' medical insurance plans; and access to a host of resources, such as informational self-help literature, peer support, self-assessment tools, and hotlines. In such cases, the mental health apps covered in this report generally leverage and direct officers to existing agency resources. In other cases, stand-alone apps may offer access to similar resources as described above but that are otherwise unaffiliated with the agency.

Regardless of the app, the critical feature of mental health apps for law enforcement is that they are designed to provide convenient, easy, and private access to a compilation of resources and supports for officers. Often, app content focuses on providing culturally relevant resources that suit the unique needs of the law enforcement community. **Figure 4** provides an overview of tools that may be offered as part of these mobile health apps.



Figure 4: Mental health apps offer a variety of tools to help support an officer's needs in one easy-to-use platform.

^{23.} True peer support involves trained officers with clinical oversight; peer support in these apps may include a wider range of services including chat rooms and discussion boards with other officers.

^{24.} Self-assessment tools do not diagnose (or claim to diagnose) any mental health conditions and do not replace trained, licensed mental health professionals.



There are benefits to mental health application software; it ...

MAY help support a culture of holistic
 wellness across the agency: Historically,
 mental health topics have been stigmatized
 and seen as "inappropriate" for discussion in the
 workplace. Law enforcement officers may feel
 discussing mental health concerns could have
 negative collateral professional consequences,
 for example, by limiting opportunities for
 advancement in the agency, being declared
 unfit for duty, or even leading to termination.
 Investment in mental health apps can help
 agencies show officers that they have a shared

"Apps are a good way to build on a culture of wellness; it does not work the other way."

> -Neil Gang Chief of Police Pinole, CA

interest in collectively improving mental health, bring attention to resources offered to officers, and help foster a culture where raising mental health issues is seen as a strength not a weakness.

 MAY aggregate many resources into one easy-to-use platform, improving accessibility: Aggregation of multiple tools into one readily accessible app may help officers easily find and access supports that address their needs. For example, some apps may recommend specific resources based on self-assessments or chat room topics. Moreover, variety in delivery methods—some self-directed and on demand, some relying on peer support, and some providing channels to one-on-one assistance with trained individuals—provides flexibility for end users while minimizing the need to access different platforms. This enhancement in resource accessibility could increase the use of mental health services, particularly in agencies where services are available, but officers perceive barriers to using the services. At the same time, in agencies with limited available services, the resources and tools provided by third-party apps may fill an important gap by providing access to supports officers would otherwise be unable to find.

- MAY enable officers to access resources privately: Accessible 24/7 by a mobile device or web platform, mental health apps enable officers to access and request resources privately and without compromising their confidentiality to superiors or peers. Most apps do not collect identifiable information. Although agencies should actively work toward destigmatizing issues related to mental health, wellness apps provide an opportunity to enhance the accessibility of mental health supports, even in environments where mental health stigma may present barriers to seeking treatment.
- MAY offer "culturally competent" resources: Agencies need tools that are culturally competent—resources designed to meet the needs of law enforcement personnel specifically and able to relate to officers from various groups and backgrounds, including age, race, and sexual orientation.²⁵ These products were developed specifically to address and empathize with many of the stressors and mental health challenges that the law enforcement community faces in their day-to-day work. Many vendors indicated that the health care providers that users can connect to are culturally competent, and some provide recommendations based on the user's insurance network and location (so that the practitioner is licensed in the user's state).

"We deal with critical incidents, stress management, finance, wills and trusts, retirements, fitness, sleep, and mental health care. We wanted our mental health and wellness app to offer the same. It gets them access to fitness, mental health care, financial planning, everything we wanted our employees to have with complete anonymity."

-Donald Holland Lieutenant Oklahoma City Police Department

^{25.} The UPenn Collaborative on Community Integration. (2001, January). Cultural competence in mental health. Community Integration Tools. http://tucollaborative.org/wp-content/uploads/2017/01/Cultural-Competence-in-Mental-Health.pdf



Today, most mental health apps are limited in that they ...

- HAVE NOT been validated for efficacy in relevant populations: The apps listed in this report have not been scientifically shown to improve clinical metrics of mental health and wellness. The value of using these products as a delivery method for mental health resources is unknown; further studies are needed to show clinical evidence of efficacy. Although some vendors claim "evidence-based" resources or mental health care providers that are "vetted" by the company, agencies should probe and consider how vendors are defining these terms. The prices of these products vary significantly across vendors, but there is no evidence that the price of a product is in any way related to its effectiveness.
- MAY NOT be able to determine the most appropriate mental health resources for a specific user: Some tools point to topical resources that may benefit the user based on simple self-assessments, but these products are unable to determine what services may be the most impactful to an officer. Even though some interventions may be more effective than others depending on the needs of the officer, it is largely up to the officer to decide which resource to use.
- MAY NOT collect actionable data for agency leadership: Even though apps may collect data on usage statistics, the data are anonymized and cannot be used to identify officers who may exhibit greater needs for mental health assistance. One vendor, MindBase, uses dispatch data to identify which officers have responded to critical incidents and may need additional mental health support, but MindBase does not directly evaluate the officers' mental health needs. This factor ultimately limits agencies' ability to leverage mental health apps as an early warning system or even to understand the utility of different tools for different needs.
- MAY NOT improve engagement with mental health resources: Mental health apps may not be helpful for all officers, particularly when officers perceive barriers to using them. For example, some officers may not feel comfortable using technology to address mental health concerns or may prefer inperson engagement with peers or service providers. Moreover, some officers may not be aware of their mental health needs, may feel that the resources available through an app are irrelevant to them, or may not trust that the available app adequately protects their confidentiality. All these reasons may lead officers to choose not to use the tool.

Mental health tools may be useful for agencies that offer a range of mental health services for officers but find them underused.

However, as a result of the limited evidence for the utility of mental health apps for law enforcement, agencies with limited mental health resources should consider the potential impact of expanding the range of services offered through EAPs instead of, or possibly in conjunction with, an app.



Officers may engage with mental health apps via native apps (mobile phone) or a web-based platform.

Apps bring together tools that may otherwise be disparate and inconvenient to access in a law enforcement agency. They provide a delivery method that could potentially improve accessibility and engagement with several types of mental health resources and allow officers greater flexibility in their interactions with these tools. See Figure 5 for example situations.

Examples of Officers Interacting With Mental Health Apps

Access From Home: Officer Jones is feeling overwhelmed and stressed from the additional roles he was assigned because of the COVID-19 pandemic. He finds it difficult to complete tasks and is constantly worried about potential exposure to illness in his day-to-day role. At home, Officer Jones accesses his agency's mental health app and takes a self-assessment that suggests he may be suffering from "burnout." The app provides him with a checklist document reminding him of signs of burnout and suggests accessing a peer support chat group dedicated specifically to dealing with COVID-19 challenges.

Access From a Vehicle: Officer Smith knows that summer weekend shifts are often hectic and stressful, so

often hectic and stressful, so much so that she often comes into the shift with a high level of anxiety. Before starting her shift, Officer Smith accesses a meditation program on her phone through her agency's mental health app and takes a few minutes to relax and get into a positive headspace. Office

DOLICE

Connections to Trained Health care

Professionals: Officer Daniels recently lost a colleague in the line of duty and has spent most of his shifts feeling frustrated and upset. He is noticing that he is quick to anger during interactions with civilians and is having trouble sleeping. As a result, he recognizes that he is starting to make decisions that might be risky to his safety. A colleague notices this as well and suggests that talking to a professional might help him feel better. Officer Daniels knows that his agency's mental health app lets him know of therapists in his area that have experience working with law enforcement. He finds a therapist's contact information on the app and reaches out to them to schedule an introductory meeting.

Officer Engagement That Addresses Mental Health Stigma: Officer Hernandez is a rookie officer who has struggled to adjust to the work culture of her agency. She is overwhelmed with all the new information she must learn and fears that any mistake she makes will jeopardize her probationary period. She does not share this concern with her supervisor or peers out of fear that she will seem weak or incapable in her new role. However, she

receives an email informing new officers of the mental health app that their EAP offers, which signals to Officer Hernandez that her agency does acknowledge the mental health challenges of its personnel. She uses the app to enroll in her agency's peer support program, where she's able to share her thoughts with others who can reflect on their own experiences as a rookie.

Figure 5: Apps can help officers better understand mental health and connect to agency offerings.



This report provides product summaries of mental health apps for law enforcement.

The following section comprises table-based descriptive information on app products and vendors included in this landscape study. This section represents a comprehensive list of products as identified by CJTEC; however, others likely exist, especially when developed for use in other countries beyond the United States. Note that inclusion of a product in this report does not represent the National Institute of Justice's (NIJ's) or CJTEC's recommendation, endorsement, or validation of product claims. For more detailed information, please also see Appendix B.

The products and vendors included are:

Cordico Shield (Cordico)



Lighthouse Health & Wellness

(Apex Mobile/100 Club)



MindBase

(MindBase)



National

mResilience (TIAG)



ResponderRel8

(iRel8/All Clear Foundation)



WeNeverWalkAlone

(Velan Solutions)



YOU | ResponderStrong

(Grit Digital Health/All Clear Foundation)



State-Specific

Bulletproof

(Apex Mobile/The 100 Club)



WILE Guardian

(Wisconsin Law Enforcement Death Response Team)



Application Software Products for Mental Health Needs of Law Enforcement Officers

Figure 6: The app software products profiled in detail offer different features, pricing, and technical specifications. These vendors responded to CJTEC's requests for information.

			CORDICO,	LIGHTHOUSE HEALTH & WELLNESS	•if[• mindbase	mResilience	RESPONDER REL8		YOU RESPONDERSTRONG*	BULLETPROOF	
	Product Na	ame	Cordico Shield	Lighthouse	MindBase	mResilience	ResponderRel8	WeNeverWalkAlone	YOU ResponderStrong	Bulletproof	WILE Guardian
	Associated C	Company	Cordico	Apex Mobile/100 Club	MindBase	TIAG	iRel8/All Clear Foundation	We Never Walk Alone	Grit Digital Health/All Clear Foundation	Apex Mobile/100 Club	Wisconsin LEDR
	On- Demand Self-Help	Self-Help Library	Resource library that includes articles, videos, and tools	Resource library that includes articles, videos, and tools	No	Resource library that includes articles, videos, and tools	No	Resource library that includes articles, videos, and tools	Resource library that includes articles, videos, and tools	Resource library that includes articles, videos, and tools	Resource library that includes articles, videos, tools, and trainings
	Resources	Self- Assessments	Yes	Yes	No	No	No	Yes	Yes	Yes	No
	Clinically Delivered Support Network	Access to Psychological Counseling	Culturally competent therapist finder	Culturally competent therapist finder	Partnership with ZocDoc to find therapists within network	Integrates agency EAP resources for quick access to therapists within network	No	Culturally competent therapist finder	Culturally competent therapist finder	Culturally competent therapist finder	Culturally competent therapist finder
Product Features		National Hotline Access	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Produ		Peer Support Networks	Access to peer and chaplain support from within the application	Access to peer support from within the application	Offers a unique approach to peer support by creating a multijurisdictional network that allows responders to speak to peers outside of their immediate professional sphere.	Access to peer and chaplain support from within the application	Provides topic-specific "chat rooms" where responders can chat in a group setting or 1-on-1 with other responders. Al capabilities suggest specific resources, depending on topics.	Nationwide, trained peer support and professional network that connects participating agencies that have peer support programs. Agencies must have existing peer support network.	No	Access to peer support from within the application	Access to peer support from within the application
	Physical and Wellness Too		Yes	Yes	Yes (access to third- party providers)	Yes	Yes	Yes	Yes	Yes	Yes
Technical Specifications	Administrate Data Usage	or Capabilities/	Collects usage metrics, including total downloads, most frequently used resources, and time spent in applications. Data available upon request.	Collects anonymous aggregate data available to administrators on demand.	Uses integrated dispatcher data. Does not collect additional aggregate data for administrative use.	Collects anonymous aggregate data available to administrators upon request.	Collects anonymous aggregate data for iRel8 to monitor needs within app. Data not available for administrative use.	No aggregated data collected	Collects anonymous aggregate data for Grit Digital Health to monitor needs within app. Data not available for administrative use.	Collects anonymous aggregate data and provides monthly updates to administrators.	No aggregated data collected
Te	Web-Based/ Platform	/Native App	Native app	Native app	Web-based and native app	Native app	Native app	Web-based and native app	Web-based	Native app	Native app

Product Landscape

Figure 6 (continued)

_	Product Name	Cordico Shield	Lighthouse	MindBase	mResilience	ResponderRel8	WeNeverWalkAlone	YOU ResponderStrong	Bulletproof	WILE Guardian
	Associated Company	Cordico	Apex Mobile/100 Club	MindBase	TIAG	iRel8/All Clear Foundation	We Never Walk Alone	Grit Digital Health/All Clear Foundation	Apex Mobile/100 Club	Wisconsin LEDR
Pricing and Procurement	Pricing Model (per year per 100 users)	Upon request	Free—\$\$	\$\$\$	\$\$	\$	\$\$	Free	Free	Free
	Stakeholder Access (family and nonsworn free access, retirees)	Free to retirees, spouses, and nonsworn personnel	Lighthouse Core available for free to all stakeholders	Unknown	Spouses, administration, and clerks have access at no additional charge. Reserve/auxiliary and retirees are discounted by 66%.	Access limited to officers	Peer support channels available for retired or active-duty officers, dispatchers, first responders, and their family members for same cost.	Available to all stakeholders with verified email	Free to access for nonsworn professional staff and law enforcement families in Arizona. Not accessible outside Arizona.	Free access to nonsworn employee, families, and retirees
Implementation	Training/Onboarding	Onboarding process included	Onboarding process included	No	Onboarding process included and supplemental policing-focused trainings are an additional cost.	No	No	No	Onboarding process included	No
	Configurability	Agency-specific resources and logos can be added to the application for no charge.	Agency-specific resources and logos can be added to the application for no charge.	No	Agency-specific resources and logos can be added to the application for no charge.	No	No	Agency-specific resources and logos can be added to the application for a cost.	Agency-specific resources and logos can be added to the application for no charge.	No
	Accessibility Features	Plans to release a web version later this year, which should meet the Web Content Accessibility Guidelines (WCAG) 2.1 requirements at the AA level of compliance.	Not fully 508 compliant	Conforms to the WCAG 2.1, Level AA and complies with the Department of Justice's ADA Standards for Accessible Design.	Not fully 508 compliant	Unknown	Possesses a 92% accessibility score based on <u>Google</u> <u>Developer Guidelines</u> .	Unknown	Not fully 508 compliant	Conforms to the WCAG 2.1, Level A requirements and a majority of Level AA requirements.

Pricing Key	Cost Scale (U.S. Dollars)		
\$	0.01-1,500		
\$\$	1,501-5,000		
\$\$\$	5,001+		



ADOPTION GUIDANCE

Selecting and implementing mental health apps within a law enforcement agency requires planning, research, and resources. Agency decision-makers must consider multiple factors such as features, content, data use and privacy, and pricing flexibility between applications. Understanding potential return on investment of these products is challenging when little is known about the efficacy of apps as a delivery method for mental health resources, especially for the law enforcement profession. When considering the potential value of an app for your agency staff, it is important to consider who you are aiming to help, what their preferences are, and your goal in implementing the tool. CJTEC suggests thinking through the following key considerations in Figure 7 adapted from OneMind PsyberGuide's online resource, Digital Tools and Solutions for Mental Health: An Employer's Guide.

Consideration	Key Questions to Answer
Understand how officers	Are your officers aware of the breadth of existing mental health resources offered by your agency?
currently engage with	What is the current level of engagement with mental health resources, and do current resources fit this demand?
mental health resources	Are your officers technologically comfortable with accessing native and web-based apps?
	What is implementation of a mental health app intended to address?
Identify goals of mental health app	Will you assess success by access to care, and how will you measure this?
implementation and	Will you assess app reach and sustained engagement? Employee feedback and satisfaction?
success metrics	What metrics should be considered when assessing return on investment (e.g., health care expenditures, lower absences, better performance)?
Investigate the	How functional, easy to use, engaging, convenient, and interesting is the technology?
credibility, user	What research supports the technology, and how credible was the app development process?
experience, and option transparency	What are the privacy policies? What happens with the data that are entered in the app?
	How will the solution complement existing mental health resources?
Ensure the mental health app is accessible	Do current mental health services have the capacity to handle increases in service requests if the app can enhance access to these resources?
to officers	What training opportunities and troubleshooting resources will you (or the vendor) offer?
	How can agencies customize the apps to fit their needs?
	What IT approval processes are required?
Consider information technology needs in the	What data privacy standards should your agency consider?
implementation process	Are there integration challenges related to other digital tools you offer officers?
	What data are collected, and how secure will they be?
	Do you have a budget?
	Would you opt for a per-officer per-month fee for all eligible participants? Or for a select number enrolled in the digital solution?
Consider pricing models and setup costs	Is the vendor willing to agree to a "pay for performance" contract based on achievement of desired health outcomes and/or user engagement goals (e.g., minutes used)?
	Will the agency pay for the tool in its entirety, or will you require employees to share some costs?
	Are there grants or cost-sharing mechanisms across agencies to alleviate the costs of the tool?

Figure 7: Agencies should consider many factors when deciding whether a mental health app product may provide value to their organization.

^{26.} OneMind is a nonprofit organization that provides resources that help consumers make informed decisions when using mental health and wellness application software products. The organization provides information that is free from bias or product endorsement.

As agency leadership considers the potential impact of a mental health app on officers, they should leverage officer perspectives to understand officer needs.

Officer input can help inform the agency of current use and awareness of existing mental health resources, as well as outstanding needs not covered by current offerings. This input can help identify the types of resources needed in the app and assess whether officers respond positively to using an app as a means to deliver mental health resources. Engaging with end users can help understand preferences for resource delivery (e.g., whether they would be comfortable downloading an app on their personal devices, or if they would prefer on department-issued phones, though this option may be perceived as less anonymous and private).

Listening sessions may help leaders understand employee needs or interest in mental health tool offerings and how resources are currently supporting their needs. The Boca Raton Police Department (BRPD), for example, valued listening sessions when choosing and implementing a mental health app solution. Of course, soliciting such feedback may be challenging due to the continued mental health stigma in law enforcement agencies. As such, agencies should provide opportunities for officers to give anonymous feedback on these issues, whenever possible.

Case Study

Open discussions with officers helped inform BRPD leadership on selection and implementation of a mobile app to address their officers' mental health needs.

Josh Mindick is the Assistant Chief for the Boca Raton Police Department in Boca Raton, FL.

BRPD adopted a mental health and wellness app after attending FBI training, where they learned that "divorce, divorce with custody battle, and deadly use of force" may indicate that an officer may be at high risk for suicide. Acknowledging that some of their officers were going through all three situations, the BRPD sought out resources to support their officers' well-being. To inform their understanding of officer mental health needs before choosing a mental health mobile application product, the command staff conducted roll call training sessions. Assistant Chief Mindick stated, "We realized that our officers did not know all the benefits that they received from their health care plan, so we had command staff go to briefings and tell the officers what their health benefits were. That was very informative to the officers. It was from those meetings and talking with the officers that we found out about specific issues they were dealing with and then sought out specialized therapists from our provider for those issues." These roll call training sessions helped them seek out a mental health and wellness app that could be configured to the specific needs that their officers had expressed (such as financial wellness tools). BRPD wanted to offer resources on the EAP, peer support, financial well-being, and substance use issues. With help from their app provider, they were able to configure a product that addressed specific challenges the officers were facing.



Specifying agency goals associated with mental health app implementation will aid decision-making and will inform metrics.

For agency decision-makers, it can be difficult to know if the investment in a wellness app will directly improve the well-being of staff. Unfortunately, current mental health apps for law enforcement lack research evidence regarding their ability to improve mental health. However, having specific goals for the implementation of a mental health app can help agencies define "success" in their own unique context. In turn, specific metrics associated with agency goals can be developed to track and assess progress toward the goal. Conducting a pre- and post-implementation anonymous survey is one of many possible strategies for assessing adoption progress and impact. Though self-reported surveys have limitations compared with direct observation or formal mental health assessments, they can help agencies understand usage statistics and perceived effectiveness, while also collecting other feedback on the apps. Appendix C provides a sample survey agencies can use.

Both in law enforcement agencies and among employers more broadly, it can be difficult to make an informed decision about whether to purchase an employee wellness app; it helps to consider the credibility, user experience, and transparency of these apps.

Part of the difficulty in making decisions about apps is the lack of research on impact and effectiveness of such tools. To provide guidance to law enforcement agency decision-makers, CJTEC interviewed Dr. Stephen Schueller, Professor of Psychological Science at University of California, Irvine, who is a leading expert in this area. Dr. Schueller is a clinical psychologist who studies how technology can improve mental health services by expanding access and improving accessibility. His work includes the development, evaluation, and implementation of targeted digital mental health products in diverse settings.

Dr. Schueller and his colleagues developed <u>One Mind PsyberGuide</u>, a nonprofit project that aims to help people use technology to improve their mental health. One Mind PsyberGuide was established in 2013 in response to a growing need for guidelines to help people navigate the mental health app marketplace. One Mind PsyberGuide operates out of the University of California, Irvine and Northwestern University with the support of a team of experts in mental health, technology, and technology-delivered care and aims to provide accurate, reliable information on a wide variety of publicly available apps that is free of bias or endorsement. The organization provides helpful assessments of available app products and resources to help make informed purchasing decisions.



Researchers have identified critical considerations associated with mental health apps, including credibility, user experience, and transparency.

Credibility

- What research supports the technology and how credible was the app development process?
 - Direct research evidence specifically for the tool itself
 - Indirect research evidence or evidence-based principles
 - The rigor of the development process (including ongoing maintenance)
 - Popularity and clarity of purpose

User Experience

How functional, easy to use, engaging, convenient, and interesting is the technology? One Mind
assesses user experience using the Mobile App Rating Scale (MARS). MARS was developed by a
team of researchers at Queensland University of Technology who have expertise in developing
digital health tools.²⁷

Transparency

What are the privacy policies? What happens with the data that are entered in the app?
 Considerations include data storage and collection policies and how readily available this information is to users.

Many of the law enforcement–specific apps have not yet been reviewed by PsyberGuide. However, it may be useful to leverage this resource to search for apps targeting the common mental health conditions officers are likely to experience based on the extensive literature on officer stress. In addition, the site solicits review recommendations for specific apps, which can be sent directly to info@psyberguide. org. Agencies with a particular interest in understanding the utility of specific apps may wish to request targeted reviews of apps they are considering.

Making apps easily accessible to users can improve impact.

While agencies may implement apps as part of efforts to boost the use of and engagement with mental health resources, 100% utilization from staff is highly improbable. However, agencies may wish to take strategic steps to keep officers aware of and able to use these tools. For examples, agencies that purchase a mental health app should help familiarize officers with the capabilities of the app, offer troubleshooting support when needed, and reinforce its use as part of a holistic wellness approach. Training opportunities from the vendor or provided in-house may also increase officers' comfort using a tool. Agency leadership should also make sure that certain resources offered in conjunction with the app—such as available law enforcement–focused therapists—have the capacity to handle potential increases in service requests arising from app use.

Additionally, depending on officer needs, agencies may wish to seek out apps by vendors that enable administrators to choose specific content and app features or to customize the look/feel of the product so that it is tailored to the needs of the agency, including consideration of existing resources. Vendors may also offer opportunities for configurability, allowing the end user to personalize the app, which can further help agencies adjust app platforms to fit officers' needs.

^{27.} The MARS evaluates five quality criteria categories on a 5-point scale: engagement, functionality, aesthetics, information quality, and subjective quality. More information about this rating scale can be found at https://eprints.qut.edu.au/84696/1/JMIR%20MHEALTH%20SND%20UHEALTH%20Stoyanov%20et%20al.pdf.



Agencies need to plan for additional expenses; new IT processes; and time investment associated with implementation, use, and evaluation.

Implementing a mental health app, whether "out of the box" or configured to an agency's needs, cannot be done overnight. Specifically, this process involves planning for launch, effective training, security, and maintenance of the tool. Agency leadership should involve IT specialists in their decision and implementation processes to ensure that the app complies with IT standards and that roles are clearly established for troubleshooting and maintaining the functionality of the app. Agencies should also plan sufficient time for training end users on using the app and provide adequate resources to help officers troubleshoot any potential issues.

Law enforcement agencies are likely limited in the resources they can invest in wellness applications, particularly smaller agencies in more rural contexts. Most app developers work to make their pricing competitive and affordable for agencies, but prices across vendors can vary significantly. Most apps are priced per person per year, which reduces the cost burden for small-to-medium agencies; however, some charge a yearly enterprise fee that can reach several thousand dollars. Furthermore, agencies can integrate many free resources (e.g., Responder STRONG YOU) with their current wellness initiatives.

Pricing models and resource investments vary by product and adoption plan chosen.

Price is a critical determining factor in whether an agency can implement a new technology, and this may be especially true in the context of officer wellness where lack of dedicated funding may acutely limit the resources agencies can implement. Of the wellness applications landscaped, cost to the agency varied depending on several factors, including vendor company size; whether app development/maintenance was sponsored by a nonprofit or officer advocacy group; and, to a lesser extent, the level of app configurability and customization available to the user. However, interviews with application developers and end users did not indicate any apparent positive correlation between the type or amount of content offered and the yearly price of the tool.

Our local police foundation provided the funds to enable implementation of our mobile app and continues to be supportive of covering renewal fees—without their support this would not have been possible.

Josh Mindick Assistant Police Chief Boca Raton Police Department



Sharing the cost of implementing and maintaining a mental health app by establishing partnerships with other agencies or nonprofits or by advocating for local funding can help alleviate the cost burden associated with offering such a resource. Before implementing a solution, agencies should check with surrounding agencies to see if there are options for cost-sharing or statewide funding for a particular solution. The WILE Guardian offering, for example, is a freely available, statewide app for Wisconsin law enforcement agencies.

Agencies may also consider federal, state, or private grant funding sources to help purchase and maintain an app. For example, the <u>Law Enforcement Mental Health and Wellness Act Program</u>, part of the U.S. Department of Justice's Community Oriented Policing Services Program, offers funding to improve the delivery of mental health services for law enforcement personnel.

Case Study

Nonprofit funds and builds a custom mental health app for Wisconsin State Police.

The WILE Guardian app was developed through a partnership between the nonprofit Wisconsin Law Enforcement Death Response Team (WI LEDR) and App Armor, a developer that serves the law enforcement and first responder communities. LEDR wanted to provide an all-inclusive, free resource to the Wisconsin State Police Department and sought out App Armor when off-the-shelf offerings did not fit law enforcement needs. LEDR funded the development of WILE Guardian, which is available at no cost to the entire Wisconsin State Police force (sworn and nonsworn). The app provides a resource library that is managed by LEDR (including seminars and statewide training), peer support and chaplain services, wellness tools, and links to vetted mental health professionals. Agencies outside Wisconsin and its surrounding states may use the tool at no cost, but some location-specific tools (e.g., local, vetted mental health professionals) may not be applicable to them.



Conclusion

Apps are becoming an increasingly popular delivery mechanism for mental health support in a variety of settings, including in law enforcement agencies. Yet, although the literature supporting the effectiveness of mental health apps for the general population is growing, little research has directly examined the utility of mental health apps within the context of law enforcement. As such, this landscape report cannot serve as an overall endorsement of the utility of mental health apps for law enforcement personnel. For example, at this point, no strong body of evidence shows that such apps improve officers' engagement with mental health services or help officers select optimal mental health resources based on their specific needs.

However, anecdotal evidence suggests that using mental health apps in the law enforcement population likely offers benefits. Specifically, strong cultural views in the law enforcement profession may dissuade officers who seek out mental health treatment (i.e., mental health stigma).²⁸ There is also a prevalent concern among officers to maintain a high degree of privacy related to psychological and emotional concerns. An agency's investment in the development and dissemination of mental health apps may, therefore, be seen as an important signal about an agency's willingness and interest in helping to support officers. Moreover, mental health apps may be seen as a private and confidential way for accessing mental health supports, allowing officers to access needed resources despite prevalent mental health stigma in their occupational environment. Finally, apps are particularly useful for comprehensively aggregating the range of available services in one easy-to-use platform, thereby improving officer knowledge about such resources and likely making resources more accessible.

It is our hope that future research will examine the utility of law enforcement mental health apps in a more nuanced way; however, until then, this guide provides basic information about the apps that are currently available to law enforcement agencies and outlines important considerations for effectively deploying such resources.

^{28.} Drew, J. M., & Martin, S. (2021). A national study of police mental health in the USA: stigma, mental health and help-seeking behaviors. Journal of police and criminal psychology, 36(2), 295-306.



APPENDIX A: GLOSSARY

Application software

Also known as an "app," refers to software that performs specific tasks for an end user. If the end user is interacting directly with a piece of software, it is an application software. It also includes the category of mobile applications.²⁹

Critical incidents

Events that might include 1) any incident involving the use of lethal force by department personnel; 2) any unplanned occurrence, event, or disaster that threatens the peace or safety of the community; 3) any planned or unplanned event that requires the implementation of the law enforcement incident command structure to manage assets and response.³⁰

Employee assistance program

Plans that help identify and resolve issues facing troubled employees through short-term counseling, referrals to specialized professionals or organizations, and follow-up services.³¹

Mobile device

Small, wireless computing devices, such as smartphones and tablets.³²

Native application

An app that is installed directly onto a smartphone and can work, in most cases, with no internet connectivity.³³

Web-based application

Type of software that allows users to interact with a remote server via a web browser or interface.34

^{29.} Sword, A. (2017, February 7). What is application software? Tech Monitor. https://techmonitor.ai/what-is/what-is-application-software-4910115.

^{30.} Riverside Police Department. (2020, March 17). Riverside Police Department policy manual. https://riversideca.gov/rpd/resources-forms/rpd-policy-manual

^{31.} US Legal. (2021). Employee assistance program law and legal definition. https://definitions.uslegal.com/e/employee-assistance-programs/

^{32.} IBM. (2021). Defining the mobile application requirements. https://www.ibm.com/docs/en/spm/7.0.9?topic=requirements-defining-mobile-application

^{33.} App Press. (2021). Web app vs. Native app. https://www.app-press.com/blog/web-app-vs-native-app

Lvivity. (2021). Web-based application: What it is, and why you should use it. https://lvivity.com/web-based-applications#:~:text=Web-based%20applications%20 are%20a%20particular%20type%20of%20software,for%20small%20and%20large%20businesses%20around%20the%20world



APPENDIX B: PROFILES

Each profile below provides information on the applications reviewed in this landscape study for easy reference for decision-makers considering adopting these apps. For each product, the profile provides a description including data storage and computing requirements, application capabilities and information on implementation and content management, management of data privacy and analytics, and subscription model and pricing.

	Cordico Shield (Cordico)	Page 24
	Lighthouse (Apex Mobile/100 Club)	Page 25
	MindBase (MindBase)	Page 26
National	mResilience (TIAG)	Page 27
	ResponderRel8 (iRel8/All Clear Foundation)	Page 28
	WeNeverWalkAlone (Velan Solutions)	Page 29
	YOU ResponderStrong (Grit Digital Health/All Clear Foundation)	Page 30
State-Specific	Bulletproof (Apex Mobile/100 Club)	Page 31
State-S	WILE Guardian (Wisconsin Law Enforcement Death Response Team)	Page 32

Please note that the descriptions were provided by representatives of the companies, and CJTEC did not independently vet the information contained within.





Cordico Shield
https://www.cordico.com/shield/

Associated Company: Cordico Data Storage/Computing Requirements: iOS and Android compatible

Cordico Shield is an officer wellness application that serves as a robust resource hub for officers to build and maintain mental resilience. Features include wellness tools, anonymous self-assessments, peer and chaplain support, a therapist finder, physical fitness guidance, and the ability to send and receive organization-wide push notifications. The wellness tools address common stressors to law enforcement such as anxiety, depression, and work-life balance, while the self-assessments facilitate real-time screening for mental and behavioral issues with instant feedback regarding next steps. Cordico will also provide guidelines to organizations for independent vetting, free of charge. The application is provided free of charge to retirees, spouses, and nonsworn personnel.

Implementation and Content Management:

- Cordico's Implementation Team leads the organization through design and delivery of the application, ensuring content is meeting its specific needs.
- After the application is designed and delivered, Cordico's Rollout Team works alongside the organization to
 facilitate an effective rollout, providing training materials such as flyers and how-to videos. These trainings
 are included in the cost of the application.
- Content is created and/or vetted by Cordico's team of clinical psychologists with a proven record working
 with law enforcement. Resources are delivered in a variety of formats including articles and videos.
- The therapist finder identifies in-network mental health professionals who can be vetted by Cordico for an additional cost. However, Cordico will also provide guidelines to organizations for independent vetting, free of charge.
- Content can be added and removed upon request.
- Cordico's administrative portal enables the client to update information specific to the policing organization, such as adding new EAP resources or updating a roster of peer support members. Cordico can also update this information at no cost.

Data Privacy and Analytics:

- The application aggregates usage data and can be accessed by designated "administrators" to manage
 content and improve usage rates. Metrics include total downloads, most frequently used resources, and time
 spent in applications.
- All metrics are anonymous and cannot be traced back to individual users.
- New technology was created to ensure self-assessment results are protected (i.e., no identifiers such as IP addresses are stored).

- Cordico offers flexible scaled pricing models to serve agencies and organizations of all sizes. For example, the smallest agency Cordico currently serves has three people.
- The application is provided free of charge to retirees, spouses, and nonsworn personnel.





Lighthouse Health & Wellness

https://www.lighthousehw.org/

Associated Company: Apex Mobile/100 Club
Data Storage/Computing Requirements: Native app; iOS and Android compatible; version
control in compliance with iOS and Android regulations

The **Lighthouse Health & Wellness** program provides first responders with anonymous and confidential access to health and wellness resources developed specifically for public safety agencies. Lighthouse Core, a no-cost offering, provides agencies custom mobile applications that directly access the Lighthouse resource library and provide users with quick access to vetted resources and information in the areas of personal wellness, mental health and resiliency, financial wellness, crisis hotlines, peer support, and therapist identification. The Lighthouse resource library is an expansion of the Arizona-specific Bulletproof content library, offered on a state-agnostic, national scale. Additional features include agency push notifications and message centers, custom health and wellness news feeds, and message groups. In addition to the no-cost Lighthouse Core offering, Lighthouse offers tiered fee-for-service models that include Priority Updates, Enhanced Support, and Enhanced Support + Programming. Lighthouse Health & Wellness is a Public Benefit Corporation and all proceeds generated are directed back into supporting first responder wellness programs and initiatives at the local, state, and national levels.

Implementation and Content Management:

- Lighthouse Core includes fully customizable launch and marketing material to facilitate employee onboarding.
- Application content can be managed directly by administrative users or Lighthouse staff free of charge.
- Lighthouse content was originally sourced from 100 Club of Arizona. Content is primarily developed with
 help from subject matter experts. Outside material is also included in the portal after being vetted internally.
 However, Lighthouse is currently building an internal staff comprising subject matter experts who will be
 responsible for generating unique content.
- Offers a "Featured Contributors" section that engages with key opinion leaders within the law enforcement health and wellness community.
- The vetting requirements used for therapist identification include licensing, proof of extracurricular cultural competency, survey results, and time spent working with law enforcement (minimum of 3 years).

Data Privacy and Analytics:

- Anonymous, aggregate data are collected across the application for improving the platform and adding value through new resources.
- Aggregate data can be viewed by administrative users on demand.
- Agency administrators are provided agency-specific login credentials to view aggregate data.

- Lighthouse offers four subscription models: Lighthouse Core, Priority Updates, Enhanced Engagement, and Enhanced Engagement + Programming:
 - Lighthouse Core includes custom agency applications along with access to a robust resource hub and
 content library and is available to all agency employees (sworn and civilian), their families, dispatchers,
 and retirees. Setup, training, launch assistance, ongoing access to launch collateral and marketing
 materials, support, and annual updates are included.
 - Lighthouse Priority Updates plan ensures agencies are first to receive the latest application and content updates. The cost is \$975 per year per agency.
 - The Lighthouse Enhanced Engagement program offers agencies an additional source of accountability
 by working alongside Lighthouse staff on an ongoing basis to make improvements in the application
 content and utilization by leveraging agency-specific aggregate data and feedback. Pricing is \$2,500/
 year and \$2/year per employee over 75.
 - The Lighthouse Engagement + Programming program includes the additional offerings of the
 Engagement package but also includes reoccurring health and wellness programming that is catered
 to the specific health and wellness needs of the policing agency. Pricing starts at \$4,500/year plus \$4/
 year per employee over 75.





MindBase https://getmindbase.com/

Associated Company: MindBase Data Storage/Computing Requirements: Dispatch system required for integration

MindBase is a data-driven, computer-aided platform that integrates with an organization's dispatch system to identify employees who have responded to critical situations. Specifically, the platform identifies employees who have responded to critical situations and sends push notifications to resources based on specific exposure. Resources available consist of physical and mental wellness tools and are predominately offered through partnerships with other digital health companies such as Nike+ and ZocDoc, where users can schedule culturally competent coordinated care that is covered through employee insurance. Additionally, MindBase offers podcast-style sessions called "Squad Session," in which every 2 weeks a law enforcement professional is invited to speak about their experience with mental health, share their unique perspective, and share best practices. Fireside chats are also offered in which responders can directly communicate with other first responders. Lastly, a unique approach to peer support creates a multijurisdictional network that allows responders to speak to peers outside of their immediate professional sphere.

Implementation and Content Management:

- Mental health and wellness content is created by nine on-staff clinicians.
- Other content is outsourced. For example, physical fitness programming is offered through a partnership with Nike+, and mental health and wellness sources are available via Calm and MindSpace.

Data Privacy and Analytics:

- Application interfaces directly with an agency's dispatch system, and administrators can identify and privately reach out to officers responding to critical incident calls using the application.
- Application uses data that already exist within the organization.
- No data are collected on resource usage within the application.

- Baseline: \$7.5K—\$15K.
- Special for rural/small organization of 50 employees or fewer: \$2.5K.





mResilience

https://www.mresilience.net/

Associated Company: TIAG

Data Storage/Computing Requirements: Application is currently run on the Amazon Web Services government cloud, which provides advanced security and allows for federal, state, city, and county clients. Available for iOS and Android. Native allows for access to content without internet connectivity.

mResilience is a first responder wellness application that aims to improve mental and physical health of first responders by taking a proactive "prehab not rehab" approach. The app pairs evidence-based tools (breathing, mindfulness, meditation) with bite-sized tips and resources on a wide range of topics (sleep, nutrition, work-life balance, self-regulation, PTSD and depression, changing mindset, and financial health). National-level (vetted/no-cost) hotlines and resources are included. The app is tailored for the specific agency to incorporate local resources (EAP, chaplains, and any other resource the department wants officers to have access to). A peer support module creates an easy connection with support resources. An optional companion training program focuses on the science behind stress and the value of the mResilience tools.

Implementation and Content Management:

- mResilience offers department-wide onboard training and recommends use of the application as a
 supplement to in-person/virtual resiliency trainings offered by mResilience. These trainings are an optional
 additional purchase and not included in the price of the application. Department-specific training resources
 can be incorporated into the app.
- Administrators can manage content internally (including push notifications, onboarding and offboarding) or can change content by request to mResilence directly.

Data Privacy and Analytics:

- mResilience does not collect identifiable information from users. The application aggregates data for designated "administrators" that can help them monitor success, make improvements to the application, or introduce new content to meet demand.
- Analytics such as department-wide total screen time, page views, time spent on page, number of downloads, and most frequently used features are accessible to administrators upon request.
- Application can be accessed via a user's registered device. The application can be registered on more than
 one user device.

- Pricing is based on the number of primary users; however, spouses, administrative staff, and clerks have
 access to the application at no additional charge. Reserve/auxiliary officers and retirees are discounted by
 66%
- Smallest pricing block: \$5,000 for 100 primary users.
- Scale from \$9—\$48/person/year, depending on size of the department.
- Offered as an enterprise license for 1 year, but additional primary users can be added throughout the course of the year without additional charge until next renewal. Multiyear discounts apply.
- Available soon to state/local agencies via GSA schedule.





ResponderREL8
https://responderrel8.com/

Associated Company: iREL8/All Clear Foundation
Data Storage/Computing Requirements: Compatible with iOS and Android. Version control in compliance with iOS and Android regulations.

Developed by iREL8, **ResponderREL8** is a first responder wellness application that facilitates meaningful, yet anonymous, peer-to-peer connections and serves as a robust resource hub via the All Clear Foundation. ResponderREL8 provides support across the first responder discipline by connecting responders to other responders within the application. The app provides a selection of topic-specific "chat rooms" where responders can chat in a group setting or 1-on-1 with other responders. Al capabilities allow the application to suggest specific resources, depending on the topic of discussion.

Implementation and Content Management:

- While all peer-to-peer conversations take place within the secure chatrooms, all content comes directly from the All Clear Foundation.
- Content on a variety of topics is available, including bullying, career/retirement, community awareness, secondary trauma, crisis/trauma, depression, finance, burnout, sleep, and many others.

Data Privacy and Analytics:

- ResponderREL8 is 100% anonymous and stored on secured servers. The application requires an active email to log in, but authentication/login is never correlated to conversation data.
- Chat room data are stored but are deidentified and only used internally to train AI models for matching conversations with resources.
- Chat rooms are monitored but only to provide users with the correct resources when they need them and evaluate trending topics.
- The application collects anonymous aggregate data (such as daily active users, number of people in the chat room) for iREL8 to monitor needs within the app and make necessary changes in content availability.

- ResponderREL8 is currently available for download at no cost because of coverage from donor funding. In the future, the application will cost \$0.99/user/month.
- iREL8 offers two subscription/pricing models: Provide and Promote
 - Provide is the general enterprise subscription system where the organization purchases the application for their employees at \$0.99/user/month.
 - Promote encourages organizations to promote and advertise the application to their employees and in return receives 15% back for each referral.
- If an agency wishes to upgrade their Provide enterprise subscription by adding exclusive chat rooms, the
 private channel costs an additional \$10K, while a semiprivate channel costs \$5K.





WeNeverWalkAlone https://weneverwalkalone.org/

Associated Company: Velan Solutions

Data Storage/Computing Requirements: Access to the internet for web-based platform. Compatible with iOS and Android. Version control in compliance with iOS and Android regulations.

WeNeverWalkAlone™ (WNWA) is a nationwide, trained peer support and vetted mental health professional network that connects law enforcement departments that have peer support programs to increase anonymity and reduce stigma in seeking support. While being a force multiplier to the agency's in-house peer support program, the network also helps remove internal barriers that could potentially keep officers from reaching out for help. In addition to providing a large network of trained peer support professionals, WNWA connects retired or active-duty officers, dispatchers, first responders, and their family members with vetted mental health professionals across the nation. WNWA also provides self-assessments and serves as a resource hub for information regarding family-focused counseling, couples/marriage counseling, children's needs/parenting tips, therapy, and work-related stress.

Implementation and Content Management:

- Officers receive personal sign-in credentials that will provide access to the app.
- Joining departments are expected to bring a peer support group with trained members 7%–10% of its size
 to the network.
- The portal allows departments to manage their own content. They can add new recruits, remove retired
 personnel, update an officer to a peer support level after they have been trained, manage a peer support
 coordinator list, or set time-off periods for peer members.
- Badge of Life[™], the national leader in mental health and suicide prevention training for law enforcement
 officers, and Ms. Vickie Poklop, MS, LPC, from the Des Plaines Police Department, IL, vet all mental health
 professionals listed on the platform. WeNeverWalkAlone[™] and Badge of Life[™] adhere to the American
 Psychological Association's Ethical Principles of Psychologists and Code of Conduct.

Data Privacy and Analytics:

• 100% anonymous, secure, private, and confidential. Usage of any kind (portal or mobile) is not tracked.

- \$2.00/officer/month fee.
- Pricing options are flexible but depend on department size.
- Interested departments can enroll in a limited-time, free trial.





Associated Company: Grit Digital Health/All Clear Foundation
Data Storage/Computing Requirements: Brower-based software enables frequent content
updates. 15 MB local storage required. No cloud storage needed.

YOU | ResponderStrong

https://you.responderstrong.org/

Developed by Grit Digital Health, **YOU | ResponderStrong** is a confidential web-based digital wellness platform with hundreds of evidence-based resources and tools to support responders, health care workers, and their loved ones with their personal and professional well-being. The platform offers resources in formats such as articles, informational videos, responder testimonies, and self-assessments under three broad categories: succeed (financial and professional success), thrive (physical and mental health), and matter (purpose and relationships). Self-assessments guide users toward specific resources based on their individual assessment results and provide feedback regarding strengths and areas that can benefit from attention.

Implementation and Content Management:

- The web-based platform is designed for the individual but is best implemented at the organizational level.
- The platform is configurable and customizable to specific first responder populations.
- Content is collected from external resources, including the All Clear Foundation, and vetted by in-house clinical psychologists.

Data Privacy and Analytics:

- Results from self-assessments are deidentified and are stored on a secured server. All data are kept
 anonymous, and identifying information is not accessible to administrators, including employees at Grit.
- Aggregate data are collected across the platform for improving performance, understanding user behavior, and adding value through new resources.
- Sign-in requires a verified email address.

Subscription Model and Pricing:

 ResponderStrong is currently available at no cost through the All Clear Foundation. It can be customized for specific departments and/or organizations for a cost.





Bulletproof
https://www.bulletproof.org/

Associated Company: Apex Mobile/100 Club

Data Storage/Computing Requirements: Compatible with iOS and Android. Version control in compliance with iOS and Android regulations. Majority of content can also be accessed through a web-based portal, but it is marketed as an app. 100% of content can be accessed via a mobile device.

Providing resources to first responders since 2009, 100 Club is a nonprofit organization that serves state, municipal, local, and tribal law enforcement agencies across the state of Arizona and funds the development and maintenance of the Bulletproof app. **Bulletproof** is a robust resource hub that takes a holistic approach to helping law enforcement build and maintain overall wellness. The application provides resources on topics such as personal wellness, mental health, fitness/exercise/nutrition, family/relationships, and more in the form of articles, videos, and tools. The application offers quick access to 24/7 support, self-assessments, resources for law enforcement officers, and the latest updates on health and wellness news. Bulletproof also offers a therapist finder (regionally specific for Arizona practitioners) that identifies culturally competent therapists using an internal vetting process that considers licensing, proof of cultural competency, survey responses, and time spent working with law enforcement (minimum of 3 years). Additionally, Bulletproof offers direct access to peer support, access to chaplains, and a training section, which contains on-demand content available 24/7. An informational video and tool kit can be viewed at www.100club.org/bulletproof. Bulletproof staff can be contacted at Programs@100Club.org.

Implementation and Content Management:

- The robust implementation process includes access to customizable and printable posters, written
 instructions, briefing videos focused on health and wellness, and how-to videos that explain how the app
 functions and the types of content that users can expect to find.
- Content is primarily developed by 100 Club and in partnership with local and national subject matter experts. Outside material is also included in the app after being vetted internally.
- Content is managed and maintained by 100 Club staff. Agencies can add specialized content specific to their
 agency under the "My Agency Resources" section.

Data Privacy and Analytics:

- The app does not capture IP addresses.
- Login credentials are agency specific. Individual employee logins are not tracked.
- The app captures aggregate, deidentified data (e.g., how many total logins across an agency and what data are being used).
- Bulletproof provides monthly updates that offer overviews of aggregate data trends.

- Free for law enforcement officers, nonsworn professional staff, and law enforcement families in the state of Arizona.
- No limitations for total number of users per agency.





WILE Guardian
https://www.wiledr.org/wilequardians

Associated Company: Wisconsin Law Enforcement Death Response Team Data Storage/Computing Requirements: Compatible with iOS and Android. Version control in compliance with iOS and Android regulations.

WILE Guardian is a free native app that serves as a resource hub for sworn and nonsworn law enforcement officers in the state of Wisconsin and selected surrounding states. The app was created by the Wisconsin Law Enforcement Death Response (LEDR) Team (a policing-focused nonprofit) in partnership with App Armor, a software development company with a history of creating applications for public safety work. WILE Guardian offers features such as peer and chaplain support, mental and physical wellness resources, quick access to national hotlines, and lists of culturally competent therapists who have been vetted internally by WI LEDR. Additionally, WILE Guardian offers statewide trainings and access to WI LEDR virtual seminars and will soon offer live chat with peer support.

Implementation and Content Management:

- Content is currently managed by LEDR.
- Content is created internally by LEDR. External content is also available after passing an internal vetting process.

Data Privacy and Analytics:

• No user data are collected by the application.

- WILE Guardian is currently free to all sworn and nonsworn law enforcement officers. LEDR covers the cost of development and maintenance at \$13K—\$15K per year.
- Although the vetted mental health specialists and peer support offerings are specific to Wisconsin and selected surrounding states, the LEDR resources are available for anyone who works in law enforcement.



APPENDIX C: ANONYMOUS SURVEY EXAMPLE

Agencies may consider leveraging an anonymous survey before and after implementing a mental health app to assess how the product is affecting officers. Below are examples of surveys; please note that these surveys have not been tested or validated.

For a pre-implementation survey:

Please indicate how much you agree or disagree with each statement, thinking about your

Topic	experiences in the past month.	Never	Rarely	Sometimes	0ften	Always
Resilience	I bounced back quickly after hard times.					
Mindfulness	I found it difficult to stay focused on what's happening in the present.					
Depression	I felt depressed.					
Anxiety	My worries overwhelmed me.					
Anger	l felt angry.					
Sleep	l had difficulty sleeping.					

For a post-implementation survey:

- Do you use [insert name of wellness app]? Y / N
- If you use [insert name of wellness app] ...
- How often do you use it?
 - tried it once but never used again
 - a few times per month
 - weekly
 - a few times each week
 - daily
- How effective is [insert name of wellness app] at supporting your well-being?
 - very ineffective
 - ineffective
 - neutral
 - effective
 - very effective
- How much do you enjoy using [insert name of wellness app]?
 - do not enjoy at all
 - enjoy slightly
 - enjoy somewhat
 - enjoy very much
- Which aspects of the app do you find to be most helpful? (open-ended question)

Adapted from published surveys that examine officer health and wellness indicators.