



Addressing Crime through Innovative Technology

Pinal County, Arizona, Attorney's Office's Case Management Application

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COPS
Community Oriented Policing Services
U.S. Department of Justice

CNA

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Introduction

The Pinal County Attorney's Office (PCAO), like agencies in jurisdictions across the nation, has experienced rapid increases in entries into its adult diversion program since its inception in 2017. The PCAO diversion program reviewed in this case study aims to prevent immediate and long-term recidivism through virtually mediated targeted social services and resources as well as immediate, direct connection to the PCAO diversion officers. To adjust to its increased caseload and effectively use its limited resources, PCAO uses an innovative case management application—iTether—to link diversion officers with clients and facilitate risk assessments, resource referrals, electronic visitation, and communication. Users can access the software via a mobile application or web browser.

Pinal County, Arizona, is a rapidly growing, predominantly rural area with a population of roughly 435,162. Residents of Pinal County are 57.9 percent White, 29.2 percent Latino, 5.6 percent Black, and 4.6 percent American Indian. Approximately one in five households (17 percent) has income below the federal poverty threshold. The county covers more than 5,347 square miles (more than the state of Connecticut) and has no public transportation system. Pinal County houses 15 separate detention facilities, including jails and the state's maximum-security prison.

A CNA team conducted a two-day site visit with the PCAO in February 2022. During this visit, the team conducted 10 interviews with more than 25 PCAO personnel and external stakeholders focused on the implementation and outcome evaluation of the case management software technology. We also observed diversion officers using the software to conduct client intake and risk assessments. While on site, the team interacted with the software from the perspective of a diversion officer and a test client to better understand the various features of the application. Using information gleaned from this site visit, the team developed this case study, which describes the key features of the case management software and important takeaways for other agencies interested in implementing case management software for diversion and related community supervision programs.

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Implementation of Digital Case Management Software

The PCAO developed its adult diversion program in 2017, enabling eligible defendants older than 18 to avoid incarceration. Instead of incarceration, defendants engage in services aligned with their individual needs based on their responses to the validated Ohio Risk Assessment Survey (ORAS)¹ and the type of crime with which they are charged. Services may include therapeutic counseling, educational courses, substance abuse treatment, community service, or a combination of these, with each approach designed to reduce the likelihood of defendant recidivism. The PCAO's program is staffed by a victim services manager, a diversion supervisor, and four diversion officers. Diversion officers conduct ORAS assessments with defendants during the intake meeting to estimate their needs and risk of reoffending. The risk category of minimum, moderate, or maximum determined by the diversion officer guides their decisions about which treatments and resources the defendant should receive along with how often a defendant must contact them.

Throughout the program, diversion officers engage in both virtual and in-person contact with defendants to track their progress toward personal diversion goals and program requirements, discuss issues, and answer questions. Until 2019, diversion officers completed these activities using paper-based documentation, including conducting and scoring assessments by hand, providing paper brochures about resources to defendants, and manually making referrals to community supports. This manual system was burdensome,

especially when clients in remote areas were required to meet in person with diversion officers located as much as 50 miles away or sometimes outside the county. To streamline the intake process and provide more comprehensive services to defendants, the PCAO introduced the web-based case management application that both defendants and diversion officers can easily access from any computer or mobile device. In addition, given Pinal County's rurality and lack of public transportation, officers noted that the virtual meeting option has increased equity by allowing more defendants to successfully comply with the conditions of their diversion agreements.

Diversion Eligibility Criteria

- **Limited criminal history**
- **No prior felony convictions in the past 10 years (exceptions may be made)**
- **Strong willingness to cooperate with and benefit from a diversion program**
- **Ability to make full and reasonable payment of restitution**

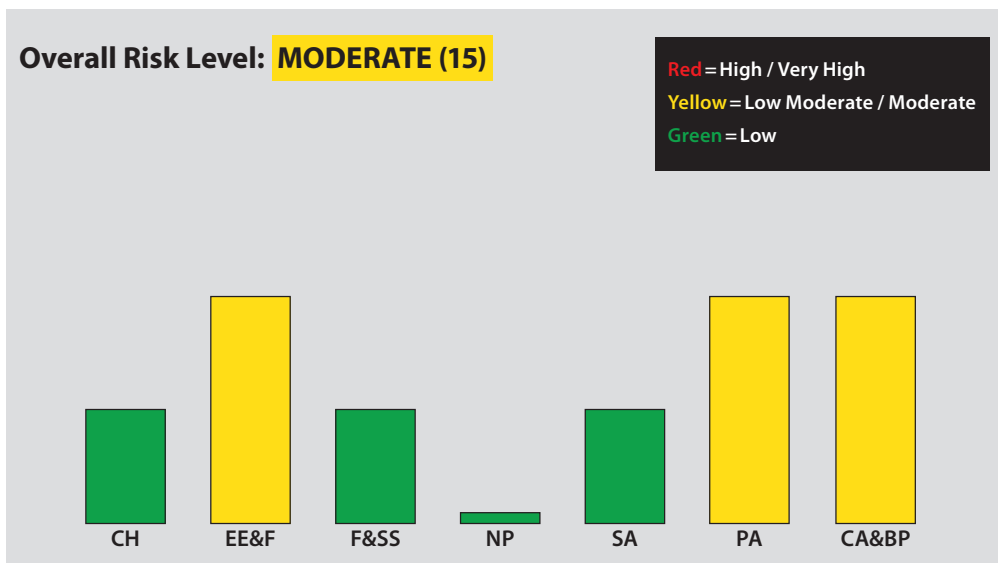
1. Edward J. Latessa et al., "The Creation and Validation of the Ohio Risk Assessment System (ORAS)," *Federal Probation* 74, no. 1 (2010), 23–33, <https://www.uscourts.gov/federal-probation-journal/2010/06/creation-and-validation-ohio-risk-assessment-system-oras>.

Key features

Assessment

The software allows diversion officers to administer a battery of assessments within the platform including the ORAS,² Adverse Childhood Experiences (ACE),³ Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE),⁴ RAND FS-36 Quality of Life Survey,⁵ and the Brief Addiction Monitor.⁶ During the administration, officers can record notes and observations directly in the application and provide affirmations or redirection as needed. The software then automatically scores the assessments and produces score visualizations (see figure 1) that assist in interpretation. Both the diversion officer and defendant can view this information in the application.

Figure 1. ORAS risk visualization sample



Source: Pinal County Attorney's Office

2. Latessa et al., "The Creation and Validation of the Ohio Risk Assessment" (see note 1).

3. Anne Murphy et al., "Adverse Childhood Experiences (ACEs) Questionnaire and Adult Attachment Interview (AAI): Implications for Parent Child Relationships," *Child Abuse & Neglect* 38, no. 2 (2014), 224–233, <https://doi.org/10.1016/j.chiabu.2013.09.004>.

4. NACHC (National Association of Community Health Centers), *Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE)* (Bethesda, MD: National Association of Community Health Centers, 2016), <https://prapare.org/>.

5. Ron D. Hays, Cathy Donald Sherbourne, and Rebecca M. Mazel, "The Rand 36-Item Health Survey 1.0," *Health Economics* 2, no. 3 (1993), 217–227, <https://doi.org/10.1002/hec.4730020305>.

6. John S. Cacciola et al., "Development and Initial Evaluation of the Brief Addiction Monitor (BAM)," *Journal of Substance Abuse Treatment* 44, no. 3 (2013), 256–263, <https://doi.org/10.1016/j.jsat.2012.07.013>.

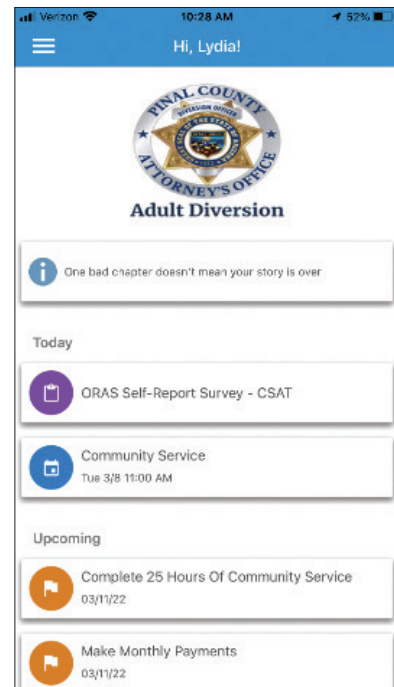
Communication

The case management software promotes the development of defendant goals, objectives, and timelines and recommends select online or community-based resources to meet these goals. It also provides access to secure, real-time videoconferencing and text messaging between diversion officers and defendants. These communication options were particularly helpful and effective throughout the COVID-19 pandemic when in-person contact was limited. In addition, the platform allows Pinal County to develop and collect defendant data with biweekly surveys to solicit information about a range of related topics, including defendant goal attainment, emotional well-being, sleep habits, relationship with their diversion officer, physical health, and satisfaction with the app.⁷ The app allows for near-real time officer follow-up with the diversion defendants. For instance, if a survey response indicates that an individual is in distress, the diversion officer and supervisor receive a notification. In one such example, a defendant's survey responses suggested that they were experiencing a mental health crisis and might have been suicidal. Their diversion officer was able to rapidly and securely reach out and connect the defendant with the services they needed. These surveys have also been used to evaluate the overall efficacy of the iTether program (the results of which are discussed further in the sections that follow).

Access to resources

Since the inception of the diversion program, the PCAO has worked with community stakeholders—including treatment providers, civic and community organizations, and other governmental organizations—to provide defendants with resources to increase successful completion of the diversion program. With the implementation of iTether, diversion officers can now make closed-loop referrals while sharing videos, brochures, contact information, and other materials from community stakeholders directly with defendants through the application. Defendants can also see information such as upcoming meetings and incomplete assignments to ensure they are maintaining progress (see figure 2). In addition, defendants can elect to share their location with their diversion officer when they are completing community service. Also included is gamified recognition of defendant's goal attainment and individual achievements such as community service or course completion.

Figure 2. User view of application



Source: Pinal County Attorney's Office

7. PCAO staff informed the CNA team that although the surveys are not required, most defendants do respond.

Key takeaways

We found that digital the case management software has the following benefits:

1. It allows defendants to easily access resources as well as track and document their progress toward their goals.
2. It facilitates direct communication between diversion officers and defendants. In addition, chats are automatically logged, so diversion officers have immediate access to all historic text communications with their defendants.
3. It has dramatically reduced paperwork and clerical duties by allowing diversion officers to virtually conduct and score intakes, which are automatically filed and readily available to them and their supervisors. These results help defendants to establish goals and quickly move into their individualized program.
4. Diversion officers can now manage high and complex caseloads more efficiently, devoting adequate time to monitoring low-risk defendants while providing more time to monitor and support moderate- to high-risk defendants.

Evolution of the PCAO's Digital Case Management Software for Adult Diversion

The PCAO attributes much of the digital case management system's success to the fact that the software was tailored to meet their needs based on input from diversion program staff and external stakeholders. The app was originally developed for health care case management, so modifications were necessary to support a criminal justice agency: For example, one officer requested adding daily positive affirmations for the defendants to the app, which became a permanent component of iTether. Another diversion officer sought a way for defendants to upload documents that showed proof of program requirement completion, which the app eventually included. After conversations with PCAO staff to understand these and other unique needs and legal requirements, the developers produced a prototype. PCAO staff and stakeholders then piloted the application for three months and provided feedback. This input was incorporated iteratively into the app before its official adoption and rollout.

Policies, procedures, and training

All diversion officers received training on the app from both the PCAO and an independent external investigator. These trainings covered how to conduct assessments, upload resources, initiate communication with defendants, help defendants develop individualized goals, and complete other tasks in the application. Because of the ORAS's significance in determining the defendants' risk status and needs, the PCAO focused heavily on proper administration of the assessment during the transition to the software. The agency also developed virtual and live trainings to help defendants use the software.

The PCAO has numerous written diversion policies, the majority of which focus broadly on diversion procedures while some address the technical functions of the application. However, the agency has created a work group to build policies and procedures specific to app implementation and future sustainability and scalability, as well as the handling of domestic violence cases, workforce development, and quality assurance reviews. The work group began meeting in February 2022 and thus had only begun their work at the time of the CNA team's visits; however, it will ultimately adapt lessons learned and anticipated challenges as they solidify the official policy.

Key takeaways

The team identified the following best practices related to software implementation:

1. Soliciting community and stakeholder input about the design, implementation, and policies relating to digital case management software prior to implementation is critical.
2. A contract with the software developer or provider should include regular opportunities for diversion officers and clients to provide feedback about user experience.

Conclusion

Impact

The PCAO, through a Bureau of Justice Assistance–funded Justice Reinvestment Initiative grant, is conducting a rigorous, randomized evaluation and cost-benefit analysis of its use of the app technology in the adult diversion program. Key research questions (RQ) include the following:

- 1a. Using content-specific surveys and valid formative assessments, is the content useful, relevant, and engaging to participants (e.g., does it address criminogenic targeted needs, prosocial and life skills, anger management, sobriety, parenting, peer group)?
- 1b. Do defendants in the treatment group reoffend less than peers in the control group?⁸
- 1c. Do defendants and offenders in the treatment group recidivate less than those in the control group by level of age, gender, ACE score, risk, crime, and length of sentence?
- 1d. Is digital case management more effective for some defendants than others (e.g., defendants of different risk levels, ages, or genders)?
- 1e. To what extent does the system meet the cultural determinants of individuals (e.g., language, ethnic traditional beliefs, religion, personal experiences, time demands)?

The evaluation will also explore implementation of the digital case management software, with the following RQs:

- 2a. How quickly do diversion officers master each component of training?
- 2b. How satisfied are diversion officers with each training module, and how has this new knowledge affected their approach to defendants?
- 2c. Does a digital platform alter officers' workload allocations by reducing over-supervision of low-risk defendants and increasing supervision and support of mid- and high-risk defendants?
- 2d. Does the cost of a digital case management system differentially benefit the PCAO?

To implement these research studies, the PCAO and its research partners are engaged in community-based participatory research (CBPR). CBPR promotes close relationships among researchers, professionals, and those who would benefit from the research. Through this approach, all stakeholders—not just researchers—are engaged in every stage of the research process. During the site visit, the CNA team saw CBPR in action.

8. The groups are defined as PCAO diversion clients who do (treatment) and do not (control) use the app.

At the stakeholder meeting, for example, all stakeholders received relatively equal speaking time. The primary research partner presented the preliminary findings from her analysis and sought input from all attendees regarding how to interpret the findings.

In interviews, diversion officers discussed ways that they provided feedback on the randomization process. Initially, diversion officers (and their caseloads, which were randomly assigned) were randomly selected to use the app or the traditional paper-based method of case management. However, diversion officers expressed the desire that all officers try the technology, so after one year of implementation, the team switched to randomizing at the client level. During the first three months, diversion officers, attorneys, and members of the stakeholder group also had the opportunity to test the design of the software platform and recommend improvements.

The outcome evaluation was still underway at the time of our site visit; however, the lead researcher noted that they had recently decided to allow all diversion clients to use the case management technology based on preliminary analyses that demonstrated substantial benefits. For instance, the preliminary analysis found that 35 percent of individuals in the treatment group successfully completed diversion, compared to only 17 percent of those in the control group. In addition, in biweekly and exit surveys, 92 percent of diversion participants in the treatment groups agreed that digital tools enhanced communication and completion of diversion, and 87 percent rated officers as knowledgeable and responsive. Further, diversion officers in the treatment groups indicated a higher degree of job satisfaction when using the app and demonstrated 100 percent retention throughout the evaluation period. The research team's next step is to conduct a cost-benefit analysis of the technology. As with the outcome evaluation, this analysis will follow a CBPR approach, allowing all stakeholders to contribute.

Aside from the direct measurements, initial research findings may also indicate the potential to expand the case management technology to fields outside of adult diversion. For example, the assistant district attorney suggested that this technology may also be able to help connect victims with services. In addition, the PCAO team is working with community stakeholders to develop interoperability agreements that would enable direct service providers, such as mental health counselors, to share data with diversion officers and defendants directly through the app. In this way, a defendant's full team—including diversion officers and individuals responsible for overseeing or providing wraparound services—can communicate through the same technology. The agency has formed a work group to determine how and to what extent external stakeholders can receive access. Ultimately, the PCAO would like to improve information sharing, the quality and quantity of resources, and evaluation efforts. The agency plans to develop an Interoperability Playbook that can be disseminated across the entire state of Arizona.

Overall, PCAO personnel expressed satisfaction with the application, noting that the vast majority of defendants use the app and that it has improved the overall operation of the diversion program. Even so, drawbacks exist. For instance, the application is currently fully available only in English, although some resources and functions have been translated into Spanish. In addition, some defendants are less comfortable with or are physically unable to use the technology, which poses accessibility challenges.⁹ Furthermore, regions of Pinal County are fairly rural, with limited access to wi-fi and technological services, which may prevent a defendant from using the application effectively. Ultimately, there is no requirement to use the iTether app, and defendants are not penalized in any way for not using the app. However, for those defendants who do want to use the app, these barriers may be difficult to overcome, and future versions of the app should attempt to address them. (However, in July 2022, the U.S. Federal Government through the ReConnect and Telecommunications Infrastructure Loan and Loan Guarantee programs, pledged \$10.6 million to expand existing fiber optic and wi-fi capabilities to six rural Arizona counties, of which Pinal County is the largest.) Upon completion, this work should resolve connectivity issues, increasing accessibility for participants in the program.

Key takeaways

The CNA team identified the following regarding impact:

1. Although the majority of clients prefer digital case management, some clients may not be comfortable using mobile applications or able to use internet technology at all and may prefer or require a traditional case management model.
2. CBPR that enables regular communication between researchers and practitioners can help strengthen the implementation of new technology.
3. This technology has a variety of potential uses outside of diversion programs. For example, this technology could help connect victims with services or could be used in probation and parole.
4. The COPS Office takes no position on whether the PCAO's case management software application meets its obligations under title II of the Americans with Disabilities Act (see note 9).

9. The COPS Office takes no position on whether the PCAO's case management application meets its obligations under title II of the Americans with Disabilities Act (42 U.S.C. § 12101 [1990], <https://www.govinfo.gov/content/pkg/USCODE-2009-title42/html/USCODE-2009-title42-chap126.htm>). Any public entity considering developing or using a similar application should be aware of its obligations to ensure that its websites and applications are accessible to people with disabilities. Additional resources can be found at <https://www.ada.gov/resources/2024-03-08-web-rule/>.

About CNA

CNA is a not-for-profit organization based in Arlington, Virginia. The organization pioneered the field of operations research and analysis 70 years ago and today applies its efforts to a broad range of national security, defense, and public interest issues, including education, homeland security, public health, and criminal justice. CNA applies a multi-disciplinary, field-based approach to helping decision-makers develop sound policies, make better-informed decisions, and lead more effectively. CNA is one of the technical assistance providers for the U.S. Department of Justice's Office of Community Oriented Policing Services' Collaborative Reform Initiative for Technical Assistance.

For more information, visit CNA online at <https://www.cna.org>.

About the COPS Office

The **Office of Community Oriented Policing Services (COPS Office)** is the component of the U.S. Department of Justice responsible for advancing the practice of community policing by the nation's state, local, territorial, and tribal law enforcement agencies through information and grant resources.

Community policing begins with a commitment to building trust and mutual respect between police and communities. It supports public safety by encouraging all stakeholders to work together to address our nation's crime challenges. When law enforcement and communities collaborate, they more effectively address underlying issues, change negative behavioral patterns, and allocate resources.

Rather than simply responding to crime, community policing focuses on preventing it through strategic problem-solving approaches based on collaboration. The COPS Office awards grants to hire community policing officers and support the development and testing of innovative policing strategies. COPS Office funding also provides training and technical assistance to community members and local government leaders, as well as all levels of law enforcement.

Since 1994, the COPS Office has been appropriated more than \$20 billion to add community policing officers to the nation's streets, enhance crime fighting technology, support crime prevention initiatives, and provide training and technical assistance to help advance community policing. Other achievements include the following:

- To date, the COPS Office has funded the hiring of approximately 138,000 additional officers by more than 13,000 of the nation's 18,000 law enforcement agencies in both small and large jurisdictions.
- More than 800,000 law enforcement personnel, community members, and government leaders have been trained through COPS Office-funded training organizations and the COPS Training Portal.
- More than 1,000 agencies have received customized advice and peer-led technical assistance through the COPS Office Collaborative Reform Initiative Technical Assistance Center.
- To date, the COPS Office has distributed more than nine million topic-specific publications, training curricula, white papers, and resource CDs and flash drives.

The COPS Office also sponsors conferences, roundtables, and other forums focused on issues critical to law enforcement. COPS Office information resources, covering a wide range of community policing topics such as school and campus safety, violent crime, and officer safety and wellness, can be downloaded via the COPS Office's home page, <https://cops.usdoj.gov>.

In this series, CNA studies the use of emerging technologies by law enforcement agencies. The Pinal County Attorney's Office (PCAO) in Arizona implemented a new digital case management software to manage the rapid increase in caseload numbers for the adult diversion program it hosts. This software helps attorneys conduct risk assessments and electronic visits and connects participants in the adult diversion program to resources and easier access to communication methods with their case attorney. The accessibility of the software for PCAO employees and program participants has streamlined an often-overworked system. This case study offers insight into the capabilities of the case management software and to the development of the policies and procedures related to the system since implementation.



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