## Introduction

The Pinal County Attorney’s Office (PCAO), like jurisdictions across the nation, has experienced rapid increases in entries into its adult diversion program. 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 individuals. 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) have incomes below the federal poverty threshold. The county is larger than the state of Connecticut, covering more than 5,347 square miles, and has no public transportation system. Pinal County houses 15 separate detention facilities, including both jails and the state’s maximum-security prison.

Our team conducted a two-day site visit with PCAO in February 2022. During this visit, we conducted 10 interviews with over 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, we 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, our 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.

## Implementation of Digital Case Management Software

The PCAO developed its adult diversion program in 2017, enabling eligible defendants above the age of 18 to avoid incarceration. Instead of incarceration, defendants engage in services aligned with their individual needs based on their responses to the validated ORAS risk assessment (Ohio Risk Assessment Survey, 2010) and the type of crime with which they are charged. Services may include therapeutic counseling, educational courses, substance abuse treatment, and/or community service, with each approach designed to reduce the likelihood of defendant recidivism. 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 resulting risk category of minimum, moderate, or maximum aids the diversion officer to determine which treatments and resources the defendant should receive, along with how often a defendant must contact the officer.

**Diversion Eligibility Criteria**

* Limited criminal history
* No prior felony convictions within 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

Throughout the program, diversion officers engage in both virtual and in-person contact with defendants to track their progress toward personal diversion goals, 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 incredibly burdensome, especially when clients in remote areas were required to meet in person with diversion officers located, sometimes, 50 miles away, or outside the county. To streamline the intake process and provide more comprehensive services to defendants, 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.

### Key features

#### Assessment

The software allows diversion officers to administer a battery of assessments within the platform including the Ohio Risk Assessment Screening (ORAS) (Latessa, Lemke, Makarios, Smith, 2010), Adverse Childhood Experiences (ACEs) (Murphy, Steele, et al, 2014), Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (**PRAPARE**) (NACHC, 2016), RAND FS-36 Quality of Life Survey, (Hays, Sherbourne, & Mazel, 1993), and the Brief Addiction Monitor (Cacciola, Alterman, et al, 2013). During the administration, officers can record notes and observations directly in the application and provide affirmations or re-direction 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.

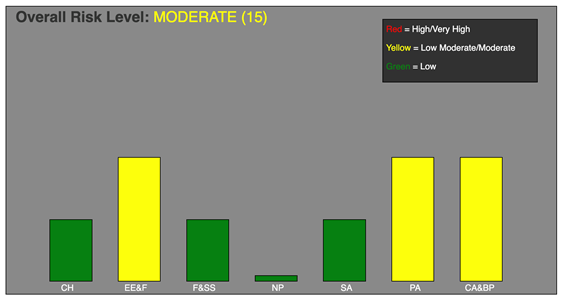


Figure . ORAS risk visualization (Source: Pinal County Attorney’s Office)

#### Communication

The case management software promotes the development of defendant goals, objectives, and timelines as well as 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 provides Pinal County the ability to develop and collect defendant data with biweekly surveys that elicit 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.[[1]](#footnote-1) The app allows for near-real-time officer follow-up with the diversion defendants. For instance, if a survey response indicates in the 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 may be 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 below).

#### Access to resources

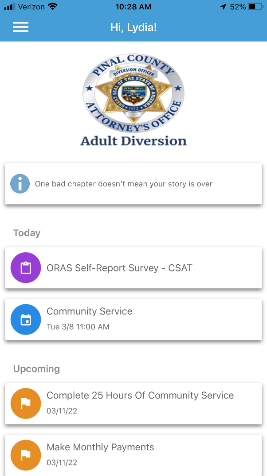
Since the inception of the diversion program, PCAO has worked with community stakeholders to provide defendants with resources to increase successful completion of the diversion program. These stakeholders include treatment providers, civic and community organizations, and other governmental organizations. 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. 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 . User view of application (Source: Pinal County Attorney’s Office)

### 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/score intakes that are auto filed and readily available to officers and supervisors. These results assist defendants to establish goals and quickly move into their individualized program.
4. Furthermore, 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 PCAO’s digital case management software for adult diversion

PCAO attributes much of the success of the digital case management system to the fact that the software was tailored to meet their needs based on input from diversion program staff and external stakeholders prior to implementing the program. The app was originally developed for health care case management, so modifications were necessary to meet support a criminal justice agency. After lengthy conversations with PCAO staff to understand their unique needs and legal requirements, the developers produced a prototype. An example of one such need occurred when an officer requested adding daily positive affirmations for the defendants to the app, which became a permanent component of iTether. the app finallyincluded PCAO staff and stakeholders then piloted the application for three months and provided feedback. Iteratively, this input was incorporated into the app before its official adoption and rollout.

### Policies, procedures, and training

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

PCAO has numerous written diversion policies, the majority of which focus broadly diversion on procedures while some address the technical functions of the application. However, the agency has created a workgroup 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 workgroup began meeting in February of 2022 and therefore is only beginning their work; however, the workgroup will ultimately adapt lessons learned and anticipated challenges as they solidify the official policy.

### Key takeaways

We 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.

## Impact

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 (RQs) include the following:

* RQ 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)?
* RQ 1b:Do defendants in the treatment group[[2]](#footnote-2) reoffend less than peers in the control group[[3]](#footnote-3)?
* RQ 1c:Do defendants and offenders in the treatment groups recidivate less than those in the control group by level of age, gender, ACE score, risk, crime, and length of sentence?
* RQ 1d:Is digital case management more effective for some defendants than others (e.g., defendants of different risk levels, ages, or genders)?
* RQ 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:

* RQ 2a:How quickly do diversion officers master each component of training?
* RQ 2b:How satisfied are diversion officers with each training module, and how has this new knowledge affected their approach to defendants?
* RQ 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?
* RQ 2d: Does the cost of a digital case management system differentially benefit the PCAO?

To implement these research studies, 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 our site visit, our team saw CBPR in action. At the stakeholder meeting, for example, all stakeholders received relatively equal speaking time. The primary research partner presented the preliminary findings from her analysis (see below) and sought input from all attendees regarding how to interpret the findings.

In our 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 3-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, as opposed 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 over 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 workgroup to determine how and to what extent external stakeholders can receive access. Ultimately, 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 still 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. 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 AZ counties, of which Pinal County is the largest.

### Key takeaways

We identified the following regarding impact:

1. Although most clients prefer digital case management, some clients may not be comfortable using mobile applications and may prefer 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.

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1. In speaking with PCAO, we were informed that the surveys, although not required, receive responses from most defendants. [↑](#footnote-ref-1)
2. Treatment group: PCAO diversion clients who use the app [↑](#footnote-ref-2)
3. Control group: PCAO diversion clients who do not use the app [↑](#footnote-ref-3)