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## Final Summary Overview

### Multi-jurisdiction Research on Automated Reporting Systems: Kiosk Supervision

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## **Purpose**

The Multi-jurisdiction Kiosk Study was designed to expand and strengthen the evidence base on kiosk reporting used to supervise probationers and parolees. The research study collected and analyzed information on the prevalence of kiosk reporting, implementation experiences of adopters of this approach, and outcomes and costs associated with its use. In addition to enhancing the evidence base, the research findings informed the development of a practical guidebook on adoption and implementation that will help community supervision agencies make knowledgeable decisions about kiosk reporting.

This mixed method study involved multiple components including: 1) a brief telephone screener and in-depth telephone interviews, 2) an implementation and cost study, and 3) an outcome study. The research methods and findings from each component are described in the remainder of this overview.

## **Project Subjects, Design, and Methods**

To examine the prevalence of kiosk supervision, the study used an existing national list of probation and parole agencies as a starting point for developing a study sampling frame of agencies throughout the United States. The agencies were mailed an NIJ endorsement letter and a pre-notification letter from Westat that provided information about the study and notification that a telephone interviewer would be contacting them to conduct a brief interview. The telephone screener was administered between August and December 2012, resulting in a 73.5 percent response rate; the interviews lasted approximately 5 minutes. Results from the screener were used to categorize agencies into one of the four following groups: 1) current kiosk users, 2) former kiosk users, 3) seriously considered using kiosks, and 4) never used or considered using kiosks.

Based on the screener results, in-depth interviews were conducted between September 2012 and March 2013 with three of the four groups: current kiosk users, former users, and those that had seriously considered using kiosks. The in-depth telephone interviews used an open-ended, semi-structured interview protocol. The interview topics included rationale and development of a kiosk reporting program, technological aspects of the kiosk, target population and reporting requirements, benefits of kiosk reporting, and officer and offender satisfaction with the program. The interviews were conducted by senior qualitative researchers with a variety of individuals within the agencies, including directors and deputy chiefs as well as probation officers who used kiosks on a regular basis and those responsible for its system management and/or maintenance. The interviews were also audiotaped with permission from the participants and lasted between 30 to 60 minutes.

Based on responses from the in-depth telephone interviews, five current kiosk users (agencies) were asked to participate in the implementation and cost study. These agencies were purposively selected to achieve diversity on agency size, geographic location, length of kiosk use, extent of use, IT sophistication, and level of risk for clients assigned to kiosk reporting. The implementation and cost study involved site visits and in-depth in-person interviews to gain an understanding of how kiosk costs, staffing, operations, data, performance, satisfaction, and outcomes varied across jurisdictions. Staff conducting the site visits used six open-ended, semi-structured instruments that were specific to the role of the interviewee: agency director, probation officer, kiosk technician, kiosk information analyst, kiosk purchasing agent, and financial officer. The site-visit interview questions were tailored to build on the information gathered during the in-depth telephone interviews and avoid redundancy. After obtaining permission for each visit, study staff requested time to meet with specific staff members identified as the most knowledgeable about the agency's use of kiosk reporting. The five 1- to 2-day site visits occurred between May 2013 and

January 2014. They provided an opportunity to tour agency facilities, observe kiosk operations, and conduct 28 in-person interviews with key staff.

Following preliminary analysis of the cost data collected during the site visits, the study contacted each site by email and telephone to request additional cost information and to clarify the cost data provided during the visits. The initial email message included follow-up questions and an invitation for sites to respond via email or by telephone. The study collected the supplemental cost data from all five sites.

The final study component, the outcome study, included the analysis of administrative data from two of the five agencies that were involved in the site visits. Westat developed a Memorandum of Understanding (MOU) with these two agencies in order to receive administrative client-level data, including demographic, criminal history, and probation-related information. Each of the two sites required a different research design. One study design compared public safety outcomes for low-risk clients assigned to kiosk supervision to low-risk clients assigned to traditional officer supervision. The second study compared public safety outcomes for low-risk clients assigned to kiosk supervision to low-risk clients assigned to telephone reporting with interactive voice response (IVR).

## **Analysis and Results**

**Screener, In-depth Telephone Interviews, and Implementation and Cost Study.** To estimate the prevalence of kiosk use nationwide from the study sampling frame, the study examined the results from the brief screener interview completed by agencies. The vast majority of the agencies reported that they had neither considered nor used kiosk reporting. The remaining agencies reported either currently using reporting kiosks; had previously, but no longer, used kiosks; or had seriously considered but never implemented a kiosk reporting program.

Another reason for conducting the screener interviews was to identify agencies for the in-depth interviews. The study identified 30 agencies that resulted in 38 individual in-depth interviews (as talking to more than one individual at an agency was sometimes necessary to obtain information on all aspects of an agency's kiosk reporting program). In total, 66 in-depth interviews were transcribed from audio files to provide verbatim responses for analysis; this included 38 telephone interviews plus 28 in-person site visit interviews. All transcribed interviews were proof-read for transcription errors then uploaded to a database created in NVivo (qualitative analysis software). The qualitative analysis integrated data collected from all in-depth interviews with analysis findings from the five site visits, including review of documents collected during the visit (e.g., procedural manuals, forms, and summary statistical reports) and observations made while on site. Finally, qualitative analysts used NVivo to develop and apply a coding scheme to the qualitative text to identify themes and patterns in the data.

Results from the qualitative data suggest several aspects of kiosk reporting are important to adoption and implementation, including the alignment of kiosk reporting requirements with client risk level, location and hours of kiosk operation, and the integration of kiosk reporting data with an agency's case management system. The study used the most salient themes from the qualitative results to develop a kiosk supervision guidebook for community corrections professionals. Based on the qualitative data, the guidebook recommends that agencies interested in kiosk reporting consider the experience of other agencies with kiosk reporting, decide on several features of the system, and estimate the start-up and ongoing costs for those features. Doing so will help agencies understand whether a kiosk reporting program is the right choice for them, and what factors should be taken into consideration in planning and implementing a program.

Finally, data from the telephone and in-person interviews suggest that kiosk start-up, operation, and maintenance costs vary widely among community supervision agencies; and agency

costs per client vary dramatically depending on the type of supervision used. The qualitative data suggest that variations in kiosk costs can be explained, at least in part, by: 1) the number of operating kiosks and the timeframe in which the kiosks were implemented; 2) whether the kiosks are owned or rented; 3) if the system was purchased from an outside vendor or built by the agency; and 4) whether the hardware and software maintenance is contracted out to a vendor or performed by an agency staff member. Despite these variations, preliminary findings on the cost of reporting in five diverse community supervision agencies suggest kiosk reporting, primarily for low-risk clients, is much less costly than face-to-face officer supervision. For low-risk clients, the ongoing cost of kiosk reporting tends to be less than 10 percent of the cost of face-to-face reporting. However, the costs of telephone reporting with Interactive Voice Response (IVR) are even lower than those of kiosk reporting.

**Outcome Study.** As previously indicated, the outcome study involved data from two probation agencies (sites). However, the analysis and findings presented here are for three studies (two from one site and one from the other site), which are labeled as Outcome Study 1A, Outcome Study 1B, and Outcome Study 2.

**Outcome Study 1A** involved comparing kiosk to officer supervision. This study sought to answer the research question: Do kiosk reporting and traditional face-to-face reporting achieve comparable public safety outcomes? It examined recidivism and probation violations among low-risk clients assigned to kiosk or officer supervision. The study took advantage of the implementation approach used in a large urban county to carry out two studies (Outcome Study 1A and 1B). Outcome Study 1A focused on the office at which kiosk probation was first implemented. In this study, adults on probation were contemporaneously assigned to officer and kiosk supervision groups. The study used administrative data consisting of intake, violation, and discharge records

provided by the county probation department (DOP) and arrest data that was provided by the state department of public safety (DPS).

In Outcome Study 1A, probation staff met on a weekly (or as needed) basis to identify low-risk adult clients appropriate for kiosk supervision and a comparable sample who received officer supervision. Eligible individuals had more than 6 months remaining on probation, did not have a history of DWI, and had not committed violent offenses in the preceding 5-year period. In addition, their scores on the Wisconsin Risk/Needs Scales placed them in the minimum risk and minimum needs categories. New clients were eligible after 3 months, but individuals who had previously been on probation were not eligible unless the most recent episode had been completed at least 5 years earlier. At this office, eligible probationers were assigned on a rolling basis to the kiosk and officer supervision groups between December 2011 and January 2014, based on the availability of slots in each group. The current analyses did not include otherwise eligible individuals who were receiving supervision in the jurisdiction but had been adjudicated in another county, because comparable violation data were not available.

The kiosk and officer supervision groups had similar demographic makeups, risk and needs scores, and criminal histories. The participants were predominately single and male, and averaged slightly over 30 years of age at sentencing. In terms of race, most identified themselves as white or black; in terms of ethnicity, coded separately, a notable proportion identified themselves as Hispanic. Most were employed and nearly two-thirds had completed high school or received a GED. The groups had similar Wisconsin Risk scores and marginally different Needs scores. Individuals had on average nearly three arrests prior to the current probation episode and were on probation for about 2 years prior to beginning the study. A higher proportion in the officer group, however, had committed a felony that triggered the current probation episode, and the mean probation sentence was longer for the officer group. While on probation, nearly one in ten clients received a referral for

substance abuse, mental health, or co-occurring mental health and substance use assessment or services.

The results for Outcome Study 1A indicate a slightly greater proportion of kiosk users, compared to clients supervised by officers, received a violation. In a multivariate logistic regression, analyses included offense type as a covariate, because individuals with a misdemeanor trigger crime were more likely to have a violation, compared to those with a felony, as well as demographic variables that differed between the groups. Analyses also included the Wisconsin Risk score, because it was positively correlated with receiving a violation.

Logistic regression results showed no difference in violations between clients supervised on kiosk and those who reported to officers. Individuals with misdemeanor trigger charges were more likely to violate than those with felony charges, and individuals sentenced to longer probation terms were less likely to violate. Finally, individuals with higher risk scores were more likely to violate, and needs scores did not predict violation status.

Rearrest during the 6 months after the study began was low and equivalent for clients supervised on kiosk and those supervised by an officer. A multivariate logistic regression was run to assess the effect of client group on rearrest, but an omnibus test of model coefficients showed that the resulting model was inadequate. In other words, the set of predictors did not contribute to the model, consistent with the similarity of rearrest rates for the kiosk and officer groups.

**Outcome Study 1B** included adult probationers who were supervised at five offices (other than the office included in Outcome Study 1A). These offices initiated kiosk use at different times between August 2012 and January 2014. Probation staff used several selection criteria to identify eligible individuals for kiosk supervision; the kiosk group included all clients assigned to kiosk use. Eligible individuals had more than 6 months remaining on probation, did not have a history of DWI, and had not committed violent offenses in the preceding 5-year period. In addition, their

scores on the Wisconsin Risk/Needs Scales placed them in the minimum risk and minimum needs categories. New clients were eligible after 3 months, but individuals who had previously been on probation were not eligible unless the most recent episode had been completed at least 5 years earlier.

Using these eligibility criteria, a retrospective comparison group was formed of individuals who received officer supervision at the five offices prior to kiosk implementation. The officer supervision group included adults who began probation between November 2011 and April 2013 (i.e., no later than 9 months before kiosk use was initiated at that office). This allowed each individual a minimum 3-month period of officer supervision, consistent with the kiosk selection criteria, and a 6-month follow-up period prior to kiosk implementation at an office. Officer-supervised clients who completed probation within 3 months of adjudication were excluded. Analyses did not include otherwise eligible individuals who were receiving supervision in the jurisdiction but had been adjudicated in another county, because comparable violation data were not available.

The kiosk and officer supervision groups in Outcome Study 1B displayed small differences in demographic makeup. In terms of race, most individuals identified themselves as white or black; in terms of ethnicity, coded separately, a notable proportion identified themselves as Hispanic. Compared to the kiosk group, though, the officer group had a significantly higher proportion of men, and a lower proportion of married participants. At sentencing, kiosk participants were slightly older than those in the officer group. About two-thirds of each group had completed high school or received a GED, but individuals in the officer group were slightly more likely to be unemployed. The kiosk group, on average, had lower Wisconsin Risk scores and lower Needs scores, and fewer arrests prior to the study. For both groups, the current probation episode was commonly triggered by a felony rather than a misdemeanor arrest, and the average probation sentence was over 4 years.

Individuals were often on probation for more than 2 years prior to beginning the study. While on probation, individuals in the officer group were slightly more likely to receive a referral for substance abuse, mental health, or co-occurring mental health and substance use assessment or services.

The results for Outcome Study 1B indicate, in contrast to those for Outcome Study 1A, kiosk users were somewhat less likely to receive a violation compared to individuals supervised by an officer. In a multivariate logistic regression, analyses included offense type as a covariate, because individuals with a misdemeanor trigger crime were more likely to have a violation, compared to those with a felony, as well as demographic variables that differed between the groups. Also, non-white individuals received more violations than white individuals, and those with longer probation sentences were less likely to have a violation. Finally, officer-supervised clients had more violations than kiosk users at four of the five probation offices, so this was controlled.

Logistic regression results showed no difference in violations between clients supervised on kiosk and those who reported to officers. Individuals with misdemeanor trigger charges were about two times more likely to violate than those with felony charges, and those with higher needs were also more likely to violate. A subsequent model tested the interaction between group and probation office. This added term did not improve the model fit, suggesting that after controlling for demographic and probation characteristics, violations were treated similarly for the intervention groups across the five probation offices.

Rearrest within 6 months was slightly less common among clients supervised on kiosks than those supervised by an officer. The likelihood of rearrest, however, did not vary across the five probation offices. A multivariate logistic regression was run to assess the effect of client group on rearrest, including demographic characteristics that differed between the groups as covariates. The results showed no difference in rearrest between clients supervised on kiosk and those who reported to officers.

**Outcome Study 2** examined rearrest and failure to report among low-risk adult probationers assigned to kiosk reporting or telephone reporting with IVR. (As mentioned, Outcome Study 2 uses data from a different probation agency in a different state than was used for Outcome Studies 1A and 1B.) For this study, the sample included a population of low-risk probationers who were assigned to report by kiosk in one of five regions as of February 2012 and those who began probation through June 2012. From this population, 1,159 clients were selected to participate in monthly “distance reporting” via telephone reporting with IVR. The IVR group included a random selection of eligible clients from four of the five regions and all eligible clients from the fifth region; these individuals were enrolled in IVR between February and June 2012. The kiosk group was comprised of individuals in regions 1 to 4 who continued to receive the standard kiosk supervision services, and no individuals from region 5. On average, the participants in each group had been on probation for nearly 2 years prior to starting the study, but this period of time ranged widely.

The Outcome Study 2 probationers were predominately male, with a higher proportion of men in the kiosk group compared to the IVR group. The groups also differed by race. The kiosk group included more black than white clients, along with individuals who identified themselves as multiracial, Hispanic, or another race. The IVR group included more white than black clients, as well as individuals who identified themselves as multiracial, Hispanic, or another race. Those in the IVR group were, on average, slightly older than those in the kiosk group and somewhat more likely to report full-time or part-time employment. IVR participants were less likely than kiosk participants to report a previous arrest and less likely to report a previous felony arrest.

Outcome Study 2 also included data on service referrals. These data identified individuals who received referrals from an officer for alcohol, drugs or gambling; employment or vocational training; anger, domestic violence, or sex offender treatment; mental health; educational; or other services. Approximately one in four in each group received at least one service referral during their

probation term. Conditions imposed by the courts in addition to standard requirements included required fees (e.g., payment to the court, for victim assistance, or to a DNA databank), search consents, orders of protection, use of an ignition interlock device, payment of restitution or reparation, community service, and others. Probationers in the IVR group were slightly more likely to receive one or more court conditions during the index probation episode. Finally, IVR participants were slightly more likely than those in the kiosk group to make an early discharge request. Individuals were typically discouraged from making such a request without sufficient evidence of good behavior to suggest it could be granted by the courts.

For Outcome Study 2, outcome differences between the kiosk and IVR groups were tested with multivariate logistic regression, controlling for demographic and probation characteristics that differed between the groups or were related to the outcome. Because the IVR sample was randomly selected in only four of the five regions (all but region 5), regression analyses also controlled for the region in which a person reported. Finally, Kiosk-IVR differences were tested with region 5 participants excluded from the sample.

Crosstabulations for Outcome Study 2 showed that kiosk participants were slightly, but not significantly, more likely than IVR participants to be rearrested during the study period. Because the groups differed on demographic and other characteristics, the effect of kiosk supervision on rearrest was tested with a multivariate logistic regression model. Results showed that probationers reporting to a kiosk were as likely to be rearrested as those reporting via IVR. However, individuals with one or more arrests prior to the current probation episode had a higher likelihood of rearrest and those who received one or more referrals for services had a higher likelihood of rearrest. Probation length prior to admission played a significant role, with a decrease in the likelihood of rearrest for each month of probation completed before the study began. Further, individuals who made an early

discharge request were about half as likely to be rearrested. The results did not change when participants who resided in region 5 were excluded.

Crosstabulations for Outcome Study 2 also showed that kiosk participants were significantly more likely to receive a FTR violation than IVR participants. The effect of kiosk supervision on FTR was further tested with a logistic regression model that controlled for demographic and other differences between the two groups. Results revealed that probationers reporting to kiosks were more likely to fail to report than probationers reporting via IVR. Further, the likelihood of FTR was related to how long an individual had been on probation prior to beginning the study: the odds of an infraction went up slightly for each month an individual had already been on probation. Also, infractions were more likely for participants with a previous arrest and less likely when a client had made an early discharge request. Finally, these findings did not change when participants who resided in region 5 were excluded from the regression.

### **Implications for Criminal Justice Policy and Practice in the United States**

The Multi-jurisdiction Kiosk Study increases understanding of the prevalence of kiosk supervision; factors associated with successful kiosk adoption and implementation; challenges faced and lessons learned from agencies currently operating kiosks; and how kiosk costs, staffing, operations, data, performance, satisfaction, and outcomes vary across jurisdictions. Many of these lessons are detailed in a guidebook on kiosk supervision developed by the study for community corrections professionals.

The study also enhances the evidence base on the effectiveness and efficiency of one potential solution to the problem of an ever increasing population under community supervision, where large caseloads, increased workloads, and limited financial resources are becoming the norm. Automated kiosk reporting is a technology that this study found to be as effective as officer

supervision and telephone reporting with IVR on important outcomes, including probation violations, rearrests, and successful probation completion for low-risk offenders. Moreover, preliminary cost data from the study indicate kiosk reporting can be substantially less costly than traditional officer reporting.

Hence, the findings from this study suggest kiosk reporting can help community supervision agencies to manage high caseloads of low-risk clients more efficiently and without adverse public safety consequences, and to redirect scarce resources to supervising higher-risk clients with greater needs.