



Rule 20 Pilot Program Evaluation

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Executive Summary:

The Psychological Services Rule 20 Pilot Program began in January 2018 with the goal of reducing the time to complete the Rule 20 process conducted by Psychological Services examiners. This evaluation of the Pilot Program examines the outcomes of the individuals who partook in the Pilot Program compared to individuals who went through the typical Rule 20 process. The Pilot Program maintained an on-call examiner to conduct Rule 20 assessments for misdemeanor defendants in the downtown division of the Fourth Judicial District on the same day a judge ordered a Rule 20 evaluation.

In total, judges ordered 126 Rule 20 referrals during the first year of the Pilot Program (January 2018 to January 2019), and 106 unique individuals partook in the Pilot Program.

Some of the main findings of this analysis are:

- After finding a group of individuals who went through the typical Rule 20 process who were statistically identical to the Rule 20 Pilot Program Group, this analysis showed that the Rule 20 evaluation process for the Pilot Program Group took, on average, about 13 fewer days than the “business as usual” Rule 20 process, a difference that was statistically significant. Thus, the Pilot Program was very successful in reducing the time to complete the Rule 20 process.
- For individuals who had their evaluation while in custody, the Pilot Program Group averaged just over 10 days to complete the full Rule 20 process, while in custody defendants who followed the typical Rule 20 track took almost 28 days to complete the full Rule 20 process, on average. This difference was statistically significant. Thus, the Rule 20 Pilot Program is succeeding at expediting the Rule 20 evaluation process of in custody defendants.
- Rule 20s cost significantly less for the Pilot Program compared to the “business as usual” approach.” Conducting a “business as usual” Rule 20 cost, on average, \$792.88. In contrast, an average Rule 20 evaluation for an individual who partook in the Pilot Program cost \$316.39, which represents a statistically significant 60.1% reduction.
- The Criminal Court cases associated with the Pilot Program Rule 20 evaluations were disposed much more quickly, on average, than the Criminal Court cases associated with the typical Rule 20 process. On average, Pilot Program Criminal Cases reached disposition in about 98 days, while it took just over 154 days for “business as usual” cases to reach disposition. This difference was statistically significant.
- The Pilot Program did not have a statistically significant impact on the number of warrants issued in comparison to individuals who went through the typical Rule 20 process.
- Examiners from Psychological Services were no more likely to deem individuals who partook in the Pilot Program incompetent than individuals who went through the typical Rule 20 process. That is, the Pilot Program had no statistically significant bearing on the competency opinions of the Rule 20 examiners.
- Even after controlling for several relevant variables, the Rule 20 process took less time for male defendants compared to female defendants. Similarly, examiners were less likely to find male defendants incompetent compared to female defendants. Both of these differences were statistically significant and persisted regardless of whether the individuals were members of the Pilot Program Group or the Comparison Group. There were no systematic differences by race or age, however.

Introduction

The Psychological Services division of the Fourth Judicial District began a pilot program (known hereafter as the “Pilot Program”) in January 2018. The Pilot Program involves on-call examiners from Psychological Services completing Rule 20 evaluations of misdemeanor downtown defendants on the date a judge ordered the Rule 20 evaluation, with the goal of speeding up and streamlining the Rule 20 process. The purpose of a Rule 20 evaluation is to determine competence to participate in legal proceedings.

The process for the Pilot Program involved numerous court actors and justice partners. Psychological Services maintained an on-call Rule 20 examiner to conduct the Rule 20 evaluations. Public Defenders and District Court staff were responsible for notifying the on-call Psychological Services examiners about the need for a Rule 20 evaluation. Social Workers from Health and Human Services met with defendants in order to obtain mental health history data and to make any necessary records requests (tasks that a Psychological Services employee would typically complete). The Minneapolis City Attorney prosecuting the case was to provide police reports to the Psychological Services examiner prior to the examination with the defendant. Once the examiner completed the Rule 20 report, they would electronically file the report to the Court and the attorneys of record.

In February 2019, the Fourth Judicial District Court Research Division received data from Psychological Services containing the records of the individuals who partook in the Pilot Program in order to evaluate the effectiveness of the program. The Research Division also received records of individuals who had Rule 20 evaluations in 2017 and 2018, but were not part of the pilot program. As described below, this latter group served as a comparison group to determine whether the Misdemeanor Rule 20 Pilot Program met its goals. District Court Research matched the Rule 20 records from the Psychological Services database (PsychPoint) with court data in the Minnesota Court Information System (MNCIS).

This report will evaluate the Pilot Program, by addressing several questions.

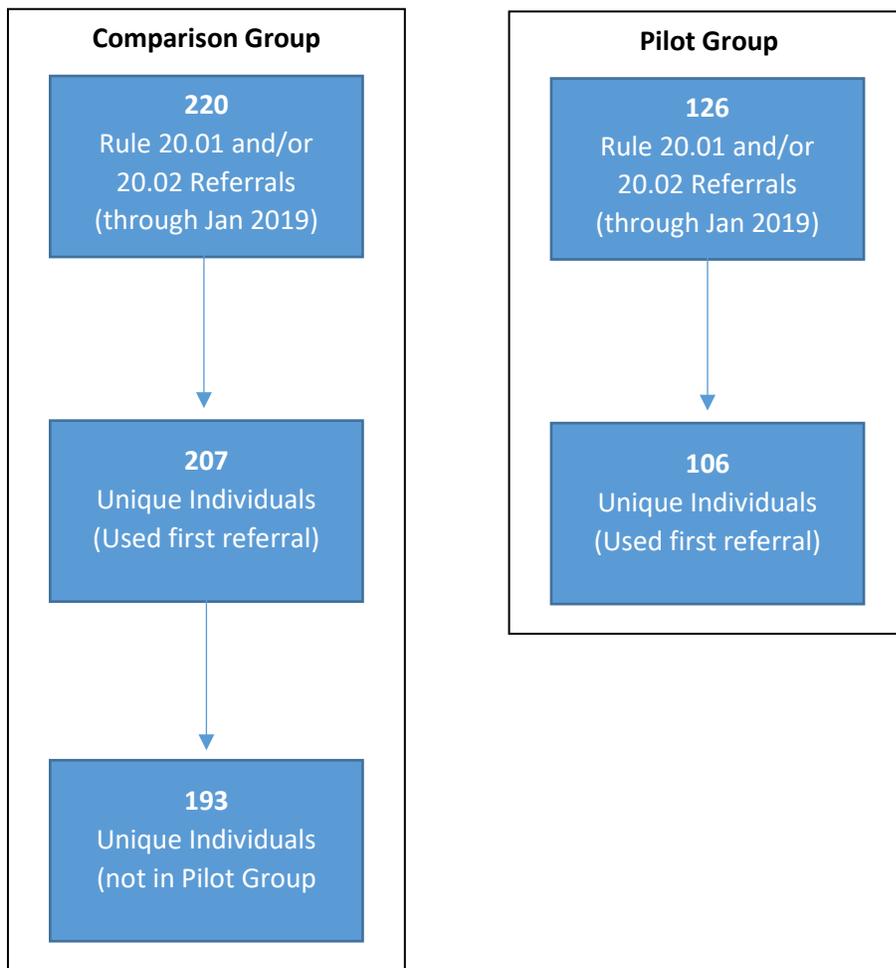
- 1) Did the Rule 20 process take fewer days to complete for the Pilot Program compared to “business as usual”?
- 2) Was there a cost savings of the Pilot Program compared to the typical Rule 20 process?
- 3) Were the Criminal cases of the Pilot Program Group disposed more quickly than those of the Comparison Group?
- 4) Did the Pilot Program group get fewer warrants than individuals who went through the regular Rule 20 process?
- 5) Did the Pilot Program expedite the Rule 20 evaluations of individuals who were in custody?
- 6) Finally, did the Pilot Program have any effect on the competency opinions of the Rule 20 examiners?

The analysis begins by discussing the composition of the Pilot Program Group and the Comparison Group. Second, we look at several attributes of the Pilot Program group and the Comparison Group to identify any systematic differences between these two cohorts. Third, we conduct a multivariate regression analysis to uncover Pilot Program’s impact on the number of days it took to complete the Rule 20 process. The report then addresses the six questions posed above. Fifth, we examine whether the Pilot Program had any systematic effect on the competency opinions of the Rule 20 examiners. This report ends with a brief conclusion.

Overview of the Pilot Program Group and the Comparison Group.

From the time the Pilot Program began in January 2018 to January 2019, judges ordered 126 Rule 20.01/20.02¹ evaluations that met the criteria for inclusion to the Pilot Program, as the right side of Figure 1 below shows. From this pool of referrals, 15 individuals had multiple Rule 20 orders during the Pilot Program². Since subsequent Rule 20 evaluations conducted on the same individuals might take less time than the first Rule 20 evaluation, we chose not to include multiple instances of Rule 20s in the Pilot Program Group. Instead, we include the first Rule 20 order from each individual who participated in the Pilot Program, for a total 106 unique individuals. We refer to these 106 individuals as the “Pilot Program Group” throughout this analysis.

Figure 1: Comparison Group and Pilot Group Referrals



We drew the pool of Comparison Group members from the 220 Hennepin County Rule 20 orders between 2017 and 2018 for alleged misdemeanor offenses that were not part of the Pilot Program.³

¹ For a full explanation of the rules of Rule 20 proceedings, see: https://www.revisor.mn.gov/court_rules/cr/id/20/

² Twelve individuals had two Rule 20 orders each and three individuals had three orders each

³ We used Rule 20 orders from these two years (instead of just 2018) for a couple reasons. First, since many individuals with Rule 20 orders had their evaluations through the Pilot Project, there were an insufficient number

Similar to the Pilot Program Group, several individuals had multiple Rule 20 orders during this time. We only included the first Rule 20 order, leaving 207 unique individuals. In addition, 14 of these individuals ultimately went on to participate in the Pilot Program, which we dropped from the Comparison Group pool in order to have as large of a sample for the Pilot Program Group as possible, which left 193 unique individuals. Of these 193 individuals, 138 had a Rule 20 order in 2017 while 55 had a Rule 20 order in 2018. Throughout this analysis, we refer to these 193 individuals as the “Comparison Group.”

Between the Pilot Program Group and the Comparison Group, there are 299 individuals in this analysis. However, many individuals in each group had missing data on some of the key variables analyzed below, which shrinks the number of individuals in each group in some of the data tables. For example, there are 49 individuals for whom there is no competency finding, which occurs when the Rule 20 process is not completed (this can occur because the examiner cannot locate the individual, because the individual declined to participate in the evaluation, or because the examiner does not issue an opinion). Furthermore, in order to evaluate the effectiveness of the Pilot Program with the upmost rigor, parts of this analysis look at statistically identical subgroups of the Pilot Program Group and the Comparison Group that contain 69 individuals from each group (for a total of 138 individuals).

Examination of the Pilot Program Group and the Comparison Group

We use the Pilot Program Group and the Comparison Group to analyze the outcomes of the Rule 20 Pilot Program. Given the goals of the Pilot Program mentioned above, perhaps the most important element of this analysis is whether the Rule 20 Pilot Program successfully reduced the time it takes examiners to complete the Rule 20 process. Table 1 shows the average number of days to complete the Rule 20 process for both groups. The top line looks at the number of days it takes, on average, to assign a judge’s Rule 20 order to a Psychological Services examiner. It takes Psychological Services, on average, about 4.65 days to assign the case to an examiner after a judge order a Rule 20 under the “business as usual” approach. In contrast, it takes, on average, 0.7 days for Psychological Services to assign a Pilot Program Rule 20 to an examiner. This difference is statistically significant and suggests the Pilot Program is doing an excellent job at expediting the Rule 20 orders for the Pilot Program right away.

The second row of Table 1 shows that once a case is in the hands of a Psychological Services examiner, it takes, on average, about 35 days to complete the evaluation process for individuals in the Comparison Group. For the Pilot Program Group, the full Rule 20 process takes, on average, about 17 days. This difference is also statistically significant, and suggests the Rule 20 evaluation and report writing process takes far less time for individuals in the Pilot Program Group.

The final line of Table 1 simply adds the totals from the first two lines to show the average number of days between the Rule 20 order and the distribution of the Rule 20 report for both groups. This start-to-finish process for the Pilot Program takes, on average, 23 days fewer than the “business as usual”

of individuals with a 2018 “business as usual” Rule 20 on a misdemeanor case to use as a proper comparison group. Specifically only 55 individuals had non-Pilot Program Rule 20s on misdemeanor cases in Hennepin County in 2018, which is about half the size of the Pilot Program group. Thus, in order to ensure that there were a sufficient number of individuals for our comparison group, we included individuals who had Rule 20s on misdemeanor cases in Hennepin County that occurred in 2017 and 2018.

approach for the Comparison Group (which is statistically significant), suggesting that the Pilot Program is highly successful in reducing the time it takes to complete the Rule 20 process.

Table 1: Average Days to Conduct Rule 20s for the Comparison Group and Pilot Program Group

	Comparison Group (N=193)	Pilot Program Group (N=106)
Average Days to Assign Rule 20 Order to Examiner†	4.7	.7
Average Days to Complete Rule 20 Process After Assignment to Examiner†	35.1	16.6
Average Days from Rule 20 Order to Distribution of Rule 20 Report†	39.8	17.3

† Difference is statistically significant at the $p < .001$ level

While it appears that the Pilot Program plays a key role in reducing the number of days to complete the Rule 20 process, we must rule out the possibility that there are systematic differences between the members of the Comparison Group and the Pilot Program Group that affect the results in Table 1 above. Indeed, since only downtown misdemeanor defendants partook in the Pilot Program, the Pilot Program’s eligibility criteria might make these two groups systematically different. As a result, we need to analyze the characteristics of each group in order to discern whether the Pilot Program itself was responsible for the significant decrease in the length of the Rule 20 Process or whether other factors were at play.

The Pilot Program Group and the Comparison Group share many similarities as well as some differences, which we explore before conducting a multivariate regression analysis to examine the effect of these characteristics. We examine demographic differences between these two groups as well as factors that more directly influence the Rule 20 process.

Table 2: Race Breakdown of Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
White	65 (33.7%)	23 (21.7%)	88
Black	69 (35.8%)	56 (52.8%)	125
Multiracial	11 (5.7%)	2 (1.9%)	13
Asian	3 (1.6%)	2 (1.9%)	5
Native American	6 (3.1%)	3 (2.8%)	9
Some Other Race	9 (4.7%)	3 (2.8%)	12
Hispanic/Latino	11 (5.7%)	6 (5.7%)	17
Unavailable	19 (9.8%)	11 (10.4%)	30
TOTAL	193 (100.0%)	106 (100.0%)	299

Table 2 above examines the race and ethnicity breakdown of the Pilot Program Group and the Comparison Group. Defendants self-report their race and ethnicity at their first court appearance. The rightmost column shows that, overall, a plurality of individuals in the full sample identify as Black, with this race category being the most common for the Pilot Program Group and the Comparison Group. However, while Black individuals comprise more than half of the sample in the Pilot Program Group (52.8%), the percentage of individuals who identify as Black in the Comparison Group is only 2% higher than those who identify as White (35.8% and 33.7%, respectively). Beyond the White and Black race

categories, the percentage of individuals self-identifying into the remainder of the race categories is quite similar between the Pilot Program Group and the Comparison Group. Despite the overall differences between the Comparison Group and the Pilot Program Group in the percentage of individuals who self-identify with each race category, these differences are not statistically significant.

Table 3: Race Breakdown of Comparison Group and Pilot Program Group

	Comparison Group†	Pilot Program Group†	Total
White	65 (33.7%)	23 (21.7%)	88
People of Color	109 (56.5%)	72 (67.9%)	181
Unavailable	19 (9.8%)	11 (10.4%)	30
TOTAL	193 (100.0%)	106 (100.0%)	299

†Difference is statistically significant at the $p < .05$ level

However, Table 2 shows that several race groups have just a few observations—especially in the Pilot Program Group—which makes multivariate analysis difficult. In order to overcome this limitation, much of the analysis below relies on bifurcated race and ethnicity categories, whereby we split the race and ethnicity data into two groups based on whether the individual self-identified as White or a Person of Color (we define a Person of Color as anyone who does not self-identify as White). Table 3 shows the compressed race and ethnicity data. While the full race and ethnicity differences between the Pilot Program group and the Comparison Group were not statistically significant, the differences are statistically significant in Table 3, whereby the Pilot Program group had more People of Color (67.9% compared to 56.5%) and the Comparison Group had more individuals who self-identified as White (33.7% compared to 21.7%).

While there were differences in the race and ethnic breakdown between the Pilot Program Group and the Comparison Group, the two groups were almost identical when it came to gender, as Table 4 highlights. In fact, there was only a one-tenth of a percent difference between the Pilot Program Group and the Comparison Group for the breakdown of females and males in each group, whereby slightly over a quarter of each sample was female and about three-fourths was male.

Table 4: Gender Breakdown of Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
Female	53 (27.5%)	29 (27.4%)	82
Male	140 (72.5%)	77 (72.6%)	217
TOTAL	193 (100.0%)	106 (100.0%)	299

The average age of the individuals in each group was quite similar as well. As Table 5 displays, the average age at the time of the Rule 20 order for the Comparison Group was 38.33 years old, while individuals in the Pilot Program Group were an average of 37.37 years old. The youngest individual in the sample was 18, and the oldest was 82. Unsurprisingly, the narrow difference in average age between the two groups does not rise to statistical significance.

Table 5: Average Age at time of Rule 20 Order for Comparison Group and Pilot Program Group

Average Age at Time of Rule 20 Order (in years)	Comparison Group	Pilot Program Group
	38.33	37.37

Another way to examine age is to break down the groups into different age brackets at the time of the Rule 20 referral. As Table 6 shows below, the number of individuals in each age group is relatively similar, and a plurality of the full sample is between 26-32 years old. While there are some slight differences between the Comparison Group and the Pilot Program Group with the percentage of individuals falling within each age bracket, the differences are not statistically significant.

Table 6: Age Groups of Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
18 – 25 Years Old	40 (20.7%)	20 (18.9%)	60
26 – 32 Years Old	45 (23.3%)	26 (24.5%)	71
33 – 38 Years Old	33 (17.1%)	21 (19.8%)	54
39 – 51 Years Old	33 (17.1%)	22 (20.8%)	55
52+ Years Old	42 (21.8%)	17 (16.0%)	59
TOTAL	193 (100.0%)	106 (100.0%)	299

There is also a difference in the type of Rule 20 evaluation ordered. Judges can order a Rule 20.01 evaluation or a Rule 20.01 and a Rule 20.02 evaluation. As Table 7 below shows, the Comparison Group had a greater proportion of cases that had a Rule 20.02 ordered compared to the Pilot Program Group (29.5% compared to 14.2%), a difference that is statistically significant.

Perhaps unsurprisingly, judicial orders that include a Rule 20.02 take longer than typical Rule 20.01 orders, as Rule 20.02 evaluations require examiners to complete extra steps. Specifically, cases containing a Rule 20.02 order take, on average, about 6 days longer to complete than typical Rule 20.01 orders. Once again, controlling for this difference becomes crucial since the Comparison Group had more Rule 20.02 orders, which take longer to complete.

Table 7: Rule 20.01/20.02 Order Breakdown of Comparison Group and Pilot Program Group

	Comparison Group†	Pilot Program Group†	Total
Only Rule 20.01	136 (70.5%)	91 (85.5%)	227
Rule 20.01 and 20.02	57 (29.5%)	15 (14.2%)	72
TOTAL	193 (100.0%)	106 (100.0%)	299

†Difference is statistically significant at the p<.01 level

Another important distinction with respect to the Rule 20 process is the custody status of the individual undergoing the evaluation. As Table 8 indicates, it was more common for individuals in the Pilot Program Group to be in custody for the Rule 20 evaluation compared to the Comparison Group. Specifically, over half of the Pilot Program Group had an in custody Rule 20 evaluation while only a quarter of the Comparison Group was in custody at the time of their evaluation, a difference that is statistically significant.

Table 8: Custody Status for Evaluation Breakdown of Comparison Group and Pilot Program Group

	Comparison Group†	Pilot Program Group†	Total
In Custody for Evaluation	47 (24.4%)	56 (53.3%)	103
Not in Custody for Evaluation	146 (75.6%)	49 (46.7%)	195
TOTAL	193 (100.0%)	106 (100.0%)	299

†Difference is statistically significant at the p<.001 level

The fact that it is more common for the Pilot Program Group to be in custody for the Rule 20 evaluation is important as there is also a statistically significant difference in the time it takes for the Rule 20 process depending on the custody status. As Table 9 displays it takes, on average, about 17 days fewer to complete the Rule 20 process when an individual is in custody compared to those individuals whose Rule 20 evaluations are done out of custody. We thus need to control for custody status since it represents another systematic difference between the Pilot Program Group and the Comparison Group that influences the time to complete the Rule 20 process.

Table 9: Average Number of Days to Complete Rule 20 Process Broken Down by Custody Status

	In Custody	Not In Custody
Average Days to Complete Rule 20 Process†	17.30 (N=94)	34.54 (N=165)

† Difference is statistically significant at the $p < .001$ level

A final consideration that might affect the time to complete the Rule 20 process is the number of open cases an individual has at the time of the Rule 20 order. While defendants typically have a “leading” case containing the most serious charge(s), they can also have “tagging” cases with similar or lesser charges that the Court often handles simultaneously. As Table 10 below shows, individuals in the Pilot Program Group have an average of 2.82 open cases at the time of the Rule 20 order while individuals in the Comparison Group averaged 1.74 cases. Thus, individuals in the Pilot Program Group, on average, have one additional open case compared to members of the Comparison Group, a difference that is statistically significant.

Table 10: Average Number of Open Cases for Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group
Average Number of Open Cases†	1.74	2.82

† Difference is statistically significant at the $p < .001$ level

This difference affects the time necessary to complete the Rule 20 process. As Table 11 below shows, the Rule 20 process takes about ten days longer for individuals with only one case compared to individuals with more than one case. Once again, we have uncovered a systematic difference between individuals in the Comparison Group and the Pilot Program Group that affects the time required to complete the Rule 20 process, which we must control for when assessing the effectiveness of the Pilot Program.

Table 11: Average Number of Days to Complete the Rule 20 Process Broken down by Caseload

	Only One Case	More than One Case
Average Days to Complete Rule 20 Process†	32.65 (N=148)	22.79 (N=112)

† Difference is statistically significant at the $p < .001$ level

Tables 2 through 11 show that the Pilot Program did not operate in a vacuum. Rather, the individuals who took part in the Pilot Program were, in many cases, systematically different from individuals who were on the “business as usual” Rule 20 track. In many cases, the Comparison Group differed from the Pilot Program group in ways that lengthened the average time to complete the full Rule 20 process. Specifically, individuals in the Comparison Group were more likely to have out of custody evaluations, have more Rule 20.02 orders, and have fewer open cases, all of which were associated with a longer

Rule 20 process. These differences make it difficult to parse out the effectiveness of the Pilot Program. That is, was it the Pilot Program itself that was responsible for the significantly shorter amount of time required to complete the Rule 20 process, or was it something about the individuals who partook in the Pilot Program vis-à-vis the Comparison Group?

Using Propensity Score Matching to Create Statistically Equivalent Groups

In order to control for the potentially confounding differences between the Comparison Group and the Pilot Program Group, we used the technique of Propensity Score Matching to create a subgroup of the Comparison Group that is statistically identical to the Pilot Program Group. Propensity Score Matching is essentially a computer algorithm that attempts to find a statistical match for all members of the Pilot Program Group from the Comparison Group. The net effect of Propensity Score Matching is to ensure that there are no statistically significant differences between two groups.

Table 12: Differences between Comparison Group and Pilot Program Group before and after Propensity Score Matching

Variable	Match Status	Pilot Group Average	Comp. Group Average	Significance
Rule 20.02	Unmatched	.157	.298	0.016
	Matched	.174	.217	0.523
Not in Custody	Unmatched	.481	.755	0.000
	Matched	.579	.521	0.497
Male	Unmatched	.699	.761	0.297
	Matched	.710	.724	0.851
Person of Color	Unmatched	.771	.636	0.033
	Matched	.739	.710	0.706
Age at Referral	Unmatched	37.5	37.2	0.852
	Matched	36.7	37.1	0.849
Number of Cases	Unmatched	2.87	1.72	0.000
	Matched	2.16	2.19	0.928
All Suburban Cases†	Unmatched	.108	.490	0.000
	Matched	.130	.116	0.797

†See footnote 4 below.

Table 12 above shows the differences between the Pilot Program Group and the Comparison Group before and after the matching technique for several key variables identified in the tables above.⁴ For each variable in the leftmost column, the “Unmatched” and “Matched” rows examine the difference

⁴ We include a variable for where an individual’s case or cases are filed in order to control for the differences between the Fourth Judicial District’s downtown division and the three suburban divisions for several reasons. First, as mentioned above, the Pilot Program was designed for individuals with cases in the downtown division, so controlling for division ensures that the Comparison Group will match the Pilot Program Group on a key attribute of the program. In addition, there are reasons to believe the Rule 20 process is handled more expeditiously in downtown. Whereas downtown misdemeanor cases are heard on a daily basis, cases in certain suburban jurisdictions are heard less often, which can potentially lengthen the time to complete the Rule 20 process. In addition, Psychological Services is headquartered downtown, which can expedite the Rule 20 process for downtown defendants. In order to control for the location where the case was filed, we look at whether an individual had all of their cases with Rule 20 orders assigned to a suburban district or not.

between the Pilot Program Group and the Comparison Group for that variable before and after the Propensity Score Matching technique. The rightmost column, “Significance”, contains the results of a statistical test to determine if the differences between the Unmatched and Matched groups are statistically significant. A “Significance” value of less than .05 suggests that the differences between the groups are unlikely to occur by random chance alone, and instead represent systematic differences between the groups.

The Unmatched groups had statistically significant differences on several variables (denoted in bold), which is exactly what the analysis above found. However, those statistically significant differences disappear once we matched the Pilot Program Group to a subset of the Comparison Group via Propensity Score Matching. Specifically, the proportion of individuals with a Rule 20.02 order, the proportion of individuals evaluated out of custody, the proportion of People of Color, the proportion of individuals with all suburban cases, and the average number of open cases per individual are all statistically equivalent between the Pilot Program Group and the Matched Comparison Group. These statistically identical groups will help us isolate the actual impact of the Pilot Program on the length of the Rule 20 process.

Using the Propensity Score Matching technique allows us to eradicate the potentially confounding differences between the Pilot Program Group and the Comparison Group seen in the tables above. While the benefit of the Propensity Score Matching technique is statistically identical control and treatment groups, the Propensity Score Matching technique could not find a suitable match for 37 individuals in the Pilot Program Group.⁵ Thus, the number of individuals in the matched Comparison Group and the Pilot Program Group is 69 each, or 138 total.

Regression Analysis to Explain how Many Days it Takes to Complete the Rule 20 Process

With these statistically identical groups, we ran an Ordinary Least Squares regression analysis in order to isolate the impact of the Pilot Program on the number of days it takes to complete the Rule 20 process while controlling for the impact of the variables identified above.

In regression analyses, researchers call the main outcome of interest the “dependent variable.” In this case, the main outcome of interest is the number of days it takes to complete the Rule 20 process. Specifically, we define this as the number of days from the assignment of the Rule 20 order to a Psychological Services Examiner to the submission of the Rule 20 report to the Court.⁶

Regression analyses also contain an array of variables that attempt to explain the variation of the dependent variable. Researchers call these explanatory variables “independent variables.” This analysis contains several independent variables that likely affect the number of days necessary to complete the Rule 20 process. The main independent variable of interest is whether an individual was part of the Pilot

⁵ Twenty-three individuals from the Pilot Program Group had missing data on one of these variables and were ineligible for inclusion as a result, only 14 individuals from the Pilot Program Group with no missing data did not have a match.

⁶ As described below, we include a variable for the number of days it takes to assign a case to a Psychological Services examiner in the array of independent variables in order to account for this part of the Rule 20 process.

Program or the Comparison Group. We assume that participation in the Pilot Program will reduce the number of days required to complete the Rule 20 process.

The second independent variable is whether a judge ordered a Rule 20.02 evaluation, and we assume that cases with a Rule 20.02 will increase the number of days to complete the Rule 20 process. Another important independent variable identified above was custody status. We include an independent variable for whether an individual had their Rule 20 evaluation out of custody, and predict that an out of custody Rule 20 evaluation will lengthen the Rule 20 process. In addition, we include a variable for the number of open cases an individual has at the time of the Rule 20 order. We also control for the number of days it took to assign the Rule 20 order to a Psychological Services examiner. Finally, we include an array of demographic factors that are common control variables in Criminal Justice research, specifically whether the individual was male, whether the individual was a Person of Color, and the individual’s age at the time of the Rule 20 order.

The results of the regression analysis are below in Table 13. Three variables, denoted in bold, were statistically significant predictors of the number of days necessary to complete the Rule 20 process. The first statistically significant variable was whether an individual partook in the Pilot Program, which was the most important independent variable in this analysis. As expected, the results of the data strongly suggest that Rule 20s for individuals in the Pilot Program group took significantly fewer days. The coefficient value of -13.409 for the Pilot Program Participant variable suggests that it takes 13.409 fewer days to complete the Rule 20 process for Pilot Program participants compared to the “business as usual approach.”

Table 13: Explaining the Number of Days to Complete Rule 20 Evaluation and Report

	Coefficient	Std. Error	t	Significance
Pilot Program Participant	-13.409	3.067	-4.37	0.000
Rule 20.01 and 20.02 Order	-1.384	3.876	-0.36	0.722
Not in Custody for Evaluation	10.304	3.062	3.37	0.001
Number of Open Cases	0.467	0.836	0.56	0.578
Days to Assign to Examiner	1.684	0.536	3.14	0.002
Male	-6.852	3.428	-2.00	0.048
Person of Color	-3.413	3.588	-0.95	0.343
Age at Rule 20 Order	-0.055	0.131	-0.42	0.676
(Constant)	32.693	7.620	4.29	0.000

R-Squared = .315; N = 138; Statistically significant variables in bold

The second statistically significant variable in this regression model was an individual’s custody status at the time of the evaluation. The coefficient value of 10.304 for this variable suggests that, on average, the Rule 20 process took about ten and a half days longer for individuals who were not in custody for the Rule 20 Evaluation.

The final variable that was statistically significant was whether the individual was male, which had a negative relationship with the number of days to complete the Rule 20 process. The coefficient of -6.852

means that Rule 20 evaluations take, on average, about seven fewer days for males compared to females.

Although gender was a significant predictor of the length of time necessary to complete the Rule 20 process, race and age have no impact on this outcome.

To recap, after we ensured that individuals in the Comparison Group were statistically identical to Pilot Program participants, and after we simultaneously controlled for all of the variables that might affect the number of days it takes to complete the Rule 20 process, only three variables have a statistically significant impact. The three variables are whether the individual was a member of the Pilot Program, an individual’s custody status at the time of the Rule 20 evaluation, and whether the individual was male. These data strongly suggest that the Pilot Program is very successful at greatly reducing the number of days necessary to complete the Rule 20 evaluation process and that the Rule 20 process for in custody individuals took significantly fewer days (the latter of which is discussed in more depth below).

Additional Impacts of the Pilot Program

While the Pilot Program is very successfully at reducing the number of days necessary to complete the Rule 20 process, Psychological Services intended the Pilot Program to have additional benefits. One secondary goal was to reduce the costs required for Psychological Services staff to complete Rule 20s. The Psychological Services database, PsychPoint, contains data about the time required to complete key elements of every referral. We linked this to salary information of Psychological Services employees (also contained in PsychPoint), which enabled us to calculate an average cost per Rule 20.

Table 14 shows that the average cost per Rule 20 order for the full Comparison Group is just shy of \$800, while the average cost of a Rule 20 order for the Pilot Program Group is \$316. This difference is statistically significant. Simply put, the cost of the “business as usual” Rule 20 process is more than double that of the cost of the Rule 20 process for the Pilot Program Group, making the Pilot Program very successful about reducing Rule 20-related costs.

Table 14: Average Cost of Rule 20 Evaluation for Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group
Average Cost Per Rule 20 Evaluation†	\$792.88	\$316.39

† Difference is statistically significant at the $p < .001$ level

A further goal of the Pilot Program was to reduce warrants of the Pilot Program Group compared to individuals who followed the “business as usual” approach. In order to evaluate this goal, we looked up failures to appear in court—which typically result in the issuance of a warrant—that occurred after the Rule 20 order. Table 15 below shows that the proportion of individuals who failed to appear for a court hearing at some point after a Rule 20 order was roughly the same for both groups (39.4% for the Comparison Group and 38.7% for the Pilot Program Group, a difference that is not statistically significant).⁷ As a result, it does not appear that the Pilot Program reduces the number of warrants issued to people who go through the Rule 20 process.

⁷ We also analyzed the total number of failures to appear, which was statistically equal between the two groups.

Table 15: Failures to Appear After Rule 20 Orders for Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
Had a FTA after Rule 20 Order	117 (60.6%)	65 (61.3%)	182
No FTA after Rule 20 Order	76 (39.4%)	41 (38.7%)	117
TOTAL	193 (100.0%)	106 (100.0%)	299

Another consideration of the Pilot Program is whether it reduced the number of days it took to reach a disposition on criminal court cases with Rule 20 orders. In order to assess this, we looked at the number of days to disposition on cases filed during the same year as the Rule 20 order.⁸

Of the 193 individuals in the full Comparison Group, 150 (77.7%) had their case(s) filed in the same year as the Rule 20 order. Of these 150 individuals, only 13 (8.7%) had a case or cases that had not been disposed as of March 2019 (see Table 17 below). For the Pilot Program Group, 98 out of 106 individuals (92.5%) had their case(s) filed in the same year as the Rule 20 order. Of these 98 individuals 16 (16.3%) had a case or cases that had not been disposed as of March 2019 (see Table 17 below).

Table 16 shows the average number of days to disposition for cases that have a Rule 20 order. The individuals in the Comparison Group had their case(s) disposed in an average of 154.8 days. Individuals in the Pilot Program Group had their case(s) disposed in an average of 98.4 days. This difference is statistically significant. Put differently, it takes over 60% longer to dispose a case for the Comparison Group compared to the Pilot Program Group, suggesting that the Pilot Program is doing a good job at disposing cases that contain Rule 20 evaluations in less time than the business as usual Rule 20 approach.

Table 16: Average Days to Disposition for Comparison Group and Pilot Program Group

Average Number of Days to Disposition for Rule 20 Case(s)†	Comparison Group	Pilot Program Group
	154.8	98.4

† Difference is statistically significant at the $p < .001$ level

While the time to disposition was significantly lower for the Pilot Program Group, we can only perform this calculation on disposed cases. As mentioned above, more individuals in the Comparison Group had their case(s) disposed compared to individuals in the Pilot Program Group (8.7% compared to 16.3%). However, although the Comparison Group had fewer individuals with a case or cases awaiting a disposition compared to the Pilot Program, the difference was not statistically significant. Statistically speaking, the Pilot Program disposes just as many cases as the business as usual approach.

Table 17: Disposed and Open Cases of the Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
No Case(s) Pending Disposition	137 (91.3%)	82 (83.7%)	219
Case(s) Pending a Disposition	13 (8.7%)	16 (16.3%)	29
TOTAL	150 (100.0%)	98 (100.0%)	248

⁸ Some individuals in both groups had cases filed years before the Rule 20 order that had not yet reached disposition, which would have greatly inflated the days to disposition calculation.

The final secondary goal analyzed is whether the Pilot Program expedited in custody Rule 20 evaluations. Table 18 below shows the average number of days necessary to complete the Rule 20 process under four various scenarios depending on whether or not the individual was a member of the Pilot Program Group and custody status at the time of the Rule 20 order.⁹ As Table 18 shows, the Pilot Program was very successful in speeding up the number of days to complete Rule 20 evaluations for in custody defendants. The Rule 20 processes for in custody defendants who participated in the Pilot Program took, on average, a little over 10 days. In contrast, in custody defendants who were not part of the Pilot Program averaged almost 28 days to complete the Rule 20 process, which is more than 17 days longer. In fact, the Rule 20 process for out of custody participants of the Pilot Program took about 8 days less than the Rule 20 process for “business as usual” in custody defendants.

Table 18: Marginal Impact of Pilot Program Participation and Custody Status on the Average Number of Days to Complete Rule 20 Process

	Not in Pilot Group and Out of Custody†	Not in Pilot Group and In Custody†	In Pilot Program Group and Out of Custody††	In Pilot Program Group and In Custody†
Average Number of Days Necessary to Complete Rule 20 Process	36.17	27.85	19.90	10.29

† Statistically significant at the p<.001 level; †† Statistically significant at the p<.005 level; N=122

Overall, the Pilot Program fared quite well in this analysis of the secondary goals of the program. Although it did not reduce warrants, the Pilot Program was significantly less costly than the “business as usual” Rule 20 process, individuals in the Pilot Program had their cases disposed much more quickly than individuals in the Comparison Group did, and in custody Pilot Program participants had, by far, the shortest average Rule 20 process.

Analysis of Competency Outcomes

The final piece of analysis of this report looks at the competency outcomes of Rule 20 evaluations to uncover whether the Pilot Program had a systematic effect on the competency opinions of examiners. Table 19 shows the results of the Rule 20 evaluations for all members of the Comparison Group and the Pilot Program Group. While examiners deem a slightly higher proportion of the Pilot Program group to be incompetent (52.8% compared to 44.6%), this difference is not statistically significant.

Table 19: Competency Opinion Breakdown of Comparison Group and Pilot Program Group

	Comparison Group	Pilot Program Group	Total
Competent	74 (38.3%)	34 (32.1%)	108
Incompetent	86 (44.6%)	56 (52.8%)	142
Unavailable	33 (17.1%)	16 (15.1%)	49
TOTAL	193 (100.0%)	106 (100.0%)	299

⁹ The outcomes in Table 18 are based on the results of the regression analysis from Table 13.

Although there does not appear to be a relationship between these two groups and competency opinions, the data in Table 19 include all 299 individuals instead of the statistically identical groups used for the regression analysis above (as a reminder competency outcomes were not part of array of variables used in the Propensity Score Matching technique). In order to determine whether there are differences in the competency outcomes among the matched groups while controlling for the effects of other potentially relevant factors, we perform a binary logistic regression analysis. This type of regression analysis looks at the impact of multiple independent variables on a dependent variable with only two potential outcomes. In this case, our outcome of interest is whether an examiner deemed individuals incompetent or not.

With the exception of the number of days it takes to complete the Rule 20 process (the dependent variable for the first regression analysis above), the independent variables in this regression are identical to the independent variables in the regression analysis above (see Table 13). In theory, these variables should be unrelated to whether an individual is competent to proceed in court.

Table 20: Determinants of an Opinion of Incompetence from Rule 20 Examiner

	Coefficient	Std. Error	Significance	Odds Ratio
Pilot Program Participant	-0.583	0.418	0.163	0.558
Rule 20.01 and 20.02 Order	0.180	0.478	0.706	1.198
Not in Custody for Evaluation	0.402	0.408	0.325	1.494
Days to Complete R20 Process	-0.034	0.013	0.009	0.966
Number of Cases	-0.023	0.108	0.829	0.977
Male	-0.979	0.460	0.033	0.376
Person of Color	-0.142	0.448	0.751	0.868
Age at Rule 20 Order	-0.028	0.017	0.092	0.972
(Constant)	2.960	1.091	0.007	0.558

R-Squared = .093; N = 132; Statistically significant variables in bold

Table 20 shows the results of this analysis. Only two variables rose to statistical significance: the number of days necessary to complete the Rule 20 process and whether the individual under evaluation was male. With respect to the number of days necessary to complete a Rule 20 evaluation, the negative coefficient of this variable suggests an inverse relationship between this variable and whether an individual is deemed incompetent. The odds ratio value of .966 suggests that each additional day necessary to complete the Rule 20 process decreased the odds of an opinion of incompetence by 3.37%.¹⁰ More directly, the odds of an examiner deeming an individual incompetent decrease the longer the Rule 20 process takes.

¹⁰ This percentage was derived from subtracting the odds ratio value from 1, and then transforming that difference in to a percent: $1 - .966 = .034$, or 3.37%.

Similarly, the negative coefficient of the variable for male individuals indicates that being male decreases the odds of an opinion of incompetence by about 62%.¹¹ Put differently, being female increases the odds of an examiner finding an individual incompetent.

Apart from these two variables, none of the other independent variables in this regression analysis had a statistically significant impact on competency opinions. Importantly, examiners were no more or less likely to find individuals in the Pilot Program Group incompetent than people in the Comparison Group.

While the two statistically significant variables in this equation deserve deeper discussion about why longer evaluations and being male decrease the odds of an opinion of incompetence, the evidence from this regression analysis suggests that examiners are not basing their competence opinions on factors such as race, age, or whether the individual was part of the Pilot Program (which are largely unrelated to an individual's competency status).

Conclusion

This analysis evaluated the Psychological Services Rule 20 Pilot Program that sought to decrease the time to complete the Rule 20 process for misdemeanor defendants charged in the downtown division of the Fourth Judicial District.

The results of this analysis strongly suggest that the Pilot Program is meeting this goal. Specifically, individuals who are part of the Pilot Program have Rule 20 processes that take, on average, over 13 fewer days than a group of statistically identical individuals who go through the "business as usual" Rule 20 process.

Furthermore, Rule 20 evaluations that are part of the Pilot Program cost less than half as much as the typical Rule 20 process, with an average cost savings of \$476 per individual.

Cases that are part of the Pilot Program take, on average, more than 50 fewer days to reach disposition. However, individuals in the Pilot Program did not have fewer warrants than individuals who partook in the typical Rule 20 process.

Finally, the Pilot Program was exceptional in expediting the Rule 20 processes for individuals who were in custody.

An odd finding of this analysis involved the outcomes of male defendants. All else equal, the Rule 20 process took almost 7 days less for male defendants compared to females. In addition, males were less likely to be found incompetent. Put differently, the Rule 20s of females took longer and were more likely to result in an opinion of incompetence.

Given the success of the Pilot Program it would behoove the Fourth Judicial District to extend the model of the Pilot Program to all downtown misdemeanants, individuals whose cases are filed in the suburban divisions of the Fourth Judicial District, and potentially individuals charged with Gross Misdemeanors, . This would likely allow the beneficial effects of the Pilot Program documented in this analysis to expand, saving defendants, Psychological Services employees, and the Court time, while also reducing taxpayer expenditures associated with the Rule 20 process.

¹¹ This percentage was derived from subtracting the odds ratio value from 1, and then transforming that difference in to a percent: $1 - .376 = .624$, or 62.4%.