Waco Connect

Law Enforcement Evaluation Report

Laura Dague, Ph.D.
ASSOCIATE PROFESSOR
TEXAS A&M UNIVERSITY

Jeehee Han, Ph.D.
ASSISTANT PROFESSOR
TEXAS A&M UNIVERSITY

EPISCOPAL HEALTH
FOUNDATION

Waco Connect Law Enforcement Evaluation Report

Submitted to the Episcopal Health Foundation

Project Team
Principal Investigator: Laura Dague, Ph.D., Associate Professor, Texas A&M University
Co-Principal Investigator: Jeehee Han, Ph.D., Assistant Professor, Texas A&M University
Student Research Assistants: Jillian Dickens, M.A., Trinity Gipson M.A.(c), Texas A&M University; with thanks to DeAngela Bynum (Waco Police Department), Corwin Rhyan (Altarum) and Len Nichols (Urban Institute/George Mason University)

Executive Summary

Growing evidence suggests the importance of economic stability, physical environment, education, food, and social context in determining one's health before the health system intervenes, an idea referred to as the social determinants of health (SDOH). The Waco Connect (WC) project, part of a national series of Collaborative Approach to Public Good Investment (CAPGI) projects, is a social care navigation program initially coordinated during the study period by Prosper Waco in Waco, Texas. WC aims to connect individuals with potential medical and social care needs who had police contact in Waco, Texas to a network of medical and non-medical resources. In partnership with the Waco Police Department (WPD), a social resource coordinator (SRC) was embedded in the WPD. Our team was contracted to serve as the local evaluator for WC. The purpose of this evaluation is to assess whether the WC project – as an intervention to invest in SDOH – reduced emergency detention orders and police call-outs. In this report, we describe WC as implemented based on internal reports and conversations with key personnel. Using data on calls provided by WPD, we used interrupted time series and difference-in-differences methods to estimate the impact of the WC intervention. We found no overall declines in EDOs or call-outs in 2022. We found that less police time was needed in response to behavioral health calls following the implementation of new procedures designed in collaboration with the SRC. The reduction in officer time was immediately obvious to WPD and they implemented these procedures for all shifts; they later hired the SRC directly. Working with the SRC was successful from the WPD perspective. We were not able to evaluate impacts on individuals detained or involved in the calls, although time to treatment would have decreased for them, and they were more likely to receive medical screenings and psychological evaluations following implementation of the new procedures.

Social determinants of health and policing

Social determinants of health are the social, economic, and environmental conditions that influence an individual's overall health and well-being (Braveman & Gottlieb, 2014). This implies that non-medical spending and policies that address these social determinants of health (SDOH) may have an impact on health outcomes (National Academies of Sciences, Engineering and Medicine, 2019). While SDOH at first might not seem directly related to policing, these determinants can play a crucial role in shaping community dynamics and influencing the types of situations that police encounter. For example, economic instability and lack of educational opportunities can contribute to the conditions that foster criminal behavior, generating links between social determinants of health and criminal behavior (Caruso, 2017).

People with serious mental illness and behavioral health problems are overrepresented in the criminal justice system (James and Glaze, 2006; Prins, 2014). Some argue that this is due to the criminalization of individuals with mental illness resulting from deinstitutionalization and insufficient community investment (Lamb and Weinberger, 2017); although this view is not universally held (Bonfine et al. 2020), deinstitutionalization certainly resulted in more individuals with a mental illness in the community setting. Regardless of the cause, police officers today often interact with individuals who need access to social services, whether housing support, addiction treatment, or mental health services, but few report related training. For example, while 66% of officers in one recent survey report frequently interacting with persons with mental illness, just 22% reported training in de-escalation techniques (Richmond & Gibbs, 2021).

Police have considerable discretion in whether to arrest or, for example, refer someone with mental illness to a mental health agency. Social determinants such as mental health services availability can impact how encounters with individuals in crisis are handled. Provision of appropriate care may reduce the likelihood of confrontations and violence. By addressing root causes like SDOH, police departments can engage in proactive crime prevention efforts, reducing the factors that lead to criminal activities in the first place. If individuals' underlying issues are resolved, they may be less likely to engage in criminal activities again. Some evidence exists that there are effects of social programs that target SDOH on crime; for example, access to health care through public insurance may facilitate treatment and reduce recidivism (Burns and Dague, 2023). Some consider criminal legal involvement to itself be a social determinant of health, as legal contact can exacerbate health problems (Rotter and Compton, 2022).

Police departments often have limited resources. Understanding social determinants can allow for more strategic allocation of resources, focusing on areas with the greatest need and potential for positive impact. Police can spend a significant amount of time on services that are not directly related to fighting crime (Clinkinbeard & Reif, 2022), although the data on this can be difficult to interpret, since they typically reflect time responding to calls rather than overall time use. A recent study of 911 calls in two jurisdictions suggested that the most frequent types of calls were consistently noncriminal and often complaints or welfare checks (Neusteter et al. 2020). Incorporating an awareness of social determinants of health into policing practices may also enable police departments to move beyond traditional law enforcement roles and engage

in a more comprehensive and community-focused approach to public safety, if they and the community they serve support such a transition. Qualitative data clearly suggest that officers are both frustrated with the system and face a lack of resources to handle such situations (e.g. Wood et al. 2021; Green, 1997).

One approach to addressing these issues is through formal or informal partnerships with and direct employment of people trained in connecting those in need with social support and allowing police officers to focus on core law enforcement duties. Embedding social workers within the police department would be one such example. These types of practices are referred to as police social work, for which there are many different models (Patterson & Swan, 2019). Social workers are trained professionals who assist by providing support, resources, and interventions that might include crisis management, counseling, and case management. Social workers can handle cases that require specialized social services, such as connecting individuals with housing, substance abuse treatment, or mental health support. Social workers are trained to handle various crisis situations, especially those involving mental health issues or domestic conflicts. Other advantages to including social workers as part of response teams is that their expertise could contribute to safer and more compassionate resolutions, reducing the use of force and potentially volatile outcomes. Improving the department's relationship with the community could also result, with better communication, trust-building, and a more positive perception of law enforcement among residents.

Examples of police social work interventions include following up with clients, determining new resources for community members, responding on scene at the request of officers, consulting with crisis response teams during critical incidents, counseling services, community outreach, and specialized training. For example, a program in Bloomington, Indiana involved imbedded police social workers, who handled referrals by officers after calls for service, responded on scene when requested, and provided trainings for officers; they report success with declines in public safety responses on the individual client calls for service, although we were unable to identify an independent evaluation (Stone, 2019). Co-responder models are increasingly common, but recent systematic reviews do not identify strong evidence supporting it (Shapiro et al., 2015; Puntis et al., 2018). Some police departments have moved toward models that include Crisis Intervention Teams (CIT), which are community-based partnerships between law enforcement agencies, community mental health agencies and generally involve specialized training for law enforcement to de-escalate crises, recognize signs of mental health issues, and make appropriate referrals to the health system (Bonfine et al. 2014). The CIT model is a form of specialized police response for which there is some evidence that police attitudes and behaviors are positively affected, but very little evidence that CIT affects subject or community level outcomes (Watson et al. 2017).

Rigorous evaluations of such programs are uncommon. A challenge in previous studies includes a lack of access to data as well as analytical methods that are unable to address potential confounding influences, which may hamper the interpretation of the findings into policy of

practice. No evaluations that we could identify used randomized controlled trial methods, the gold standard for evidence-based policy.

Including social workers in police departments or deploying them alongside police is not without controversy. Social workers themselves have concerns that include the ability to operate independently, high-turnover rates, burnout, and implementation speed (O'Dell, 2022). Alternatively, when police work closely with social workers, it has been argued that crime-fighting will be overshadowed by the objectives of social services, a coordinated approach with social workers and police officers will increase social control of residents, and that accountability will be more difficult (Holdaway, 1986). Some have pointed out that social work itself is not a solution to systemic problems in society and argue that social work collaborations can be actively harmful (Jacobs, 2021). Even so, there is clearly a national trend towards greater coordination of police, social workers, and social services.

Background on Waco Connect and WPD procedures

In this section, we describe the WPD arm of the Waco Connect project, sourced from internal reports and conversations with key personnel at Prosper Waco.

The nonprofit organization Prosper Waco in Waco, Texas was the initial lead agency on the Waco Connect project, part of a national series of Collaborative Approach to Public Good Investment (CAPGI) projects. CAPGI is a financing process to help coalitions of stakeholders sustain investments in SDOH (Nichols and Taylor, 2018). Waco Connect did not follow the CAPGI model precisely, and evolved as a social care navigation program that aimed to facilitate development of relationships and processes between local health providers, the city, and local nonprofits. The goal of Waco Connect's police arm was to help individuals with potential medical and social care needs who had police contact in Waco, Texas by linking them to a network of medical and non-medical resources.

Like other police departments, WPD faced increasing numbers of calls involving non-criminal matters and issues that might be better addressed through connection to community resources rather than necessitate incarceration or criminal procedures.[1] Common sources of incidents involving potential SDOH needs that WPD thought could be addressed were calls on suicide in progress (SUICP), which are 911 calls about someone who may be endangering their life, and emergency detention orders (EDOs), which occur when someone is exhibiting signs of suicidal or homicidal thoughts or are in a severe state of decompensation resulting from a mental health crisis and is in immediate need of help or detention. In an effort to address these types of concerns, the Waco Connect project embedded a SRC in the WPD.

---

[1] A WPD sergeant and the SRC documented the some of the issues facing the Waco community and the SRC's placement at WPD in this interview https://mywacotv.com/video/prosper-waco-september-2022/ .

The City of Waco funded the placement of an SRC within WPD by contracting with Prosper Waco to provide consultation, education, training, resource linkage, and staff support, and Prosper Waco agreed to provide up services for individuals for up to one year with an estimated caseload of 75-100 in the year. The SRC was initially employed by Prosper Waco and stationed in-house at WPD beginning August 16, 2021. The SRC's approach was informed by the sequential intercept model (Griffin et al. 2015) and she made a habit of following data collection and analysis procedures consistent with it (SAMHSA, 2019). Initially, referrals came through several channels both formal and informal, which included SUICP calls and EDOs, from patrol officers, from the repeat offenders list, and from the CCAST unit (a team at WPD focused on addressing repeat offenders). Initial referrals varied considerably in scope, and included voluntary referrals and involuntary referrals; these were quickly narrowed to include only three groups: 1) those with frequent law enforcement contact, defined as having more than 5 calls in a month or 15 in a year 2) those defined as high acuity using a tool from the Boston University school of social work, and 3) direct "warm handoff" referrals from within the PD, either patrol or dispatch. The SRC believed that the physical location within the WPD was an important part of partnership and facilitated collaboration on multiple dimensions.

Referrals included both individuals with ongoing needs and those with a one-time need, advocacy referrals in which the client might be non-compliant or incapable of compliance, potentially due to limited capacity or disability, and outlier referrals (considered out-of-scope of the project, these are individuals causing crime, typically criminal trespass, often with mental health problems, who were generally in and out of custody for three days at a time but could not be committed). Between August 2021 and August 2022, the most common intervention or need of the 541 resource linkages was mental and behavioral health, making up almost half (43%) of resources needed, followed by community resources particularly housing (21%), intensive case management (12%), legal or judicial systems (12%), elder care (7%), with other (translation, burial) at 5%.

Although the SRC was capable and experienced, and had a triage process, both this variance in scope and a high call volume created a problem of caseload sustainability. For example, 253 individuals were served, with 156 direct referrals from officers or WPD staff, of whom 85 demonstrated not only high acuity (dangerous signs of serious mental illness), but also more than 5 calls for service within a month, and more than two EDOs or SUICP calls within one month. As a result, the SRC in coordination with supervisors at the PD developed a procedural change for the scope of referrals and how EDOs would be handled. Prior EDO procedures would begin with an investigation of insanity filed with the sergeant. The WPD would then typically transport the subject individual to the hospital for psychiatric care, a process which meant that law enforcement was required to be present and remain at the hospital until a determination was made by a mental health professional – in practice, officers were spending long hours waiting in the hospital emergency room alongside the person in crisis-- and then the EDO would be cancelled. Estimates suggested that the minimum cost for time on such calls (estimated as two officers at base pay rate for the 11.5 hour per call average) was $335,000 in 2021.

Beginning in May 2022, WPD implemented a set of new procedures to guide how officers would respond to EDO calls based on the sequential intercept model. The SRC, working with WPD administration, designed a form that would allow her to collect data on the procedures. Waco officers were divided into two groups, A and B, and began following new procedures beginning in May. The groups were defined by an existing work time division; group A worked Monday to Thursday during odd months and Thursday-Sunday during even months, and group B the reverse. Within each group there were three shifts. Both officer groups were directed to complete the SRC's form when mental health concerns were present in the call, but group A would proceed to begin involuntary EDOs at the Crisis Treatment Center (CTC) rather than the usual practice, which was to begin at one of the local hospitals. CTC was a facility that offered crisis services including extended observation, residential inpatient care, and intensive outpatient services for mental and behavioral health problems and was a collaborative effort between the Heart of Texas Behavioral Health and Providence Health networks. Group A would also use the mobile crisis outreach team (MCOT; a team at Integral Care, the local Mental Health and Intellectual and Developmental Disability Authority) for all voluntary MH cases rather than follow the usual practice by transporting to one of the local hospitals. Group A officers were explicitly asked to document the staff they dealt with at CTC and MCOT, provide any feedback to the SRC, and to maintain professional relationships with staff at CTC and MCOT.

The intention of the new procedure and the different treatment of groups A and B was to collect data on the new process in order to understand how it was affecting call responses. Both groups were explicitly encouraged to follow the procedure and use the form so that data could be gathered on both next steps. It was recognized that the form represented an increase in workload (paperwork) and so the purpose and goals were made clear to all officers.

The department's initial analyses found such a saving in police time that they decided to universally implement the procedure beginning the month of June. Furthermore, as Prosper Waco decided to wind down the Waco Connect project, the WPD decided to directly employ the SRC beginning in spring 2023 and requested funds for a second social worker to focus on resource linkage. WPD additionally initiated collaboration with the local mental health authority to include a mental health clinician as part of 911 dispatch with the intention of reducing the number of calls requiring law enforcement presence. The program was widely viewed as a success. Below, we use additional data to evaluate the impacts of the program.

Data and Methods

In order to understand potential impact of the intervention, our team analyzed data on the aggregate number of EDOs and SUICP calls as well as call-level data from the completed forms filled out by officers responding to calls from May to September 2022.

Aggregate data on EDOs and SUICP calls per day were provided by WPD staff from Crystal Reports. We aggregated further to the weekly level and calculated the weekly number of calls, total hours on call, and average hours per call. For EDOs, we additionally included estimated total costs and average costs per call, which were based on the average hourly base rate for

Grade I, $34.6517 throughout the period. We then performed an interrupted time series analysis (ITSA) of the EDO and SUICP data to describe the time trends in these types of calls and examine whether trends had changed following implementation of the new procedures. We did not have data on EDOs prior to 2022 so our analyses include only 2022.

The raw deidentified data from the completed officer forms reported on measures such as time of dispatch, closure, the nature of the case, and additional actions or calls that took place. A copy of the officer form is attached as Appendix A. We performed some minor data cleaning to eliminate calls that had dates inconsistent with the time period (such as calls recorded as ending in 2023 or beginning in 2023). We also eliminated two calls that had outlier response times (49+ hours between dispatch and call close). Using the data on individual calls, we performed difference-in-differences estimation, comparing A and B groups before and after B group implemented the new procedures in June. It is important to note that this is different than the WPD internal assessment, which compared group A to group B during the month of May, and for this reason it is possible for our estimates and conclusions to differ from WPD. Our method was chosen to identify the changes in outcome variables between the two groups in order to control for potential fixed differences in group composition or timing that might affect the direct comparison of levels. Since there is no pre-period data available to study the implementation for group A, the treated group is defined as Group B, with the post-intervention period defined as June-September. We provide these difference-in-differences estimates, which describe the impact of group B implementing the intervention compared to Group A, which had already implemented it. We study hours on call, associated costs, an indicator for whether the local mental health authority dispatch (ICARE) was called, an indicator for whether the mobile crisis outreach team was called (MCOT), whether a psychological evaluation was performed, whether a basic medical clearance was performed, and whether the subject was referred to a local hospital. We also stratify by time of day and the type of call.

Limitations of the EDO and SUICP call analyses are that they rely on aggregate call data and cannot control for the types of calls; in addition, the time period is limited and there is no available control group, so the analysis may be vulnerable to outside causes of changes in trends including seasonality. Limitations of the difference-in-differences analysis include that data on individual call responses were only collected beginning with the initial intervention in May, so no data prior to the intervention is available, and the lack of data on individual outcomes unrelated to police time spent.

Results

Panel A of Tabel 1 includes the results of our aggregate ITSA analyses of EDO calls. The table includes both the average level of the outcome variables before and after May 2022 and the estimated trends, level difference, and trend differences for each outcome along with their

estimated standard errors and indicated result of a hypothesis test for whether the estimate is statistically different from zero.

An example summary of graph of average hours per call is included (Figure 1) to illustrate the methods. In the figure, we can see the downward trend prior to May, estimated in the table with a slope of -.368 and statistically significant at the 1% level; no estimated level change starting in May, shown by the similar ending points of the projected regression lines at May 1, and an estimated trend after May of -.034. The change in trend after May, an increase in slope of .33, is statistically different from zero at the 5% level and is suggestive that something happened in May that may have leveled out the decreasing average hours per call. All outcomes included in the table can be interpreted analogously. For the number of calls, no overall trends or changes in May are evident. For total hours on calls, there was a downward trend prior to May, but no estimated change in level or change in May. Total costs show a decreasing tend prior to May with no level or slope change in May. Average cost per call shows the same pattern as average hours per call as mechanically expected, with a declining trend of -12.7 and a post May relative increase in trend that was effectively a leveling out of the prior downward trend. Interpreted causally, this would suggest that May procedures leveled out prior downward trends in hours per call and as a result costs per call.

Figure 1. Interrupted Time Series Figure for Average Hours per Call on EDOs, 2022
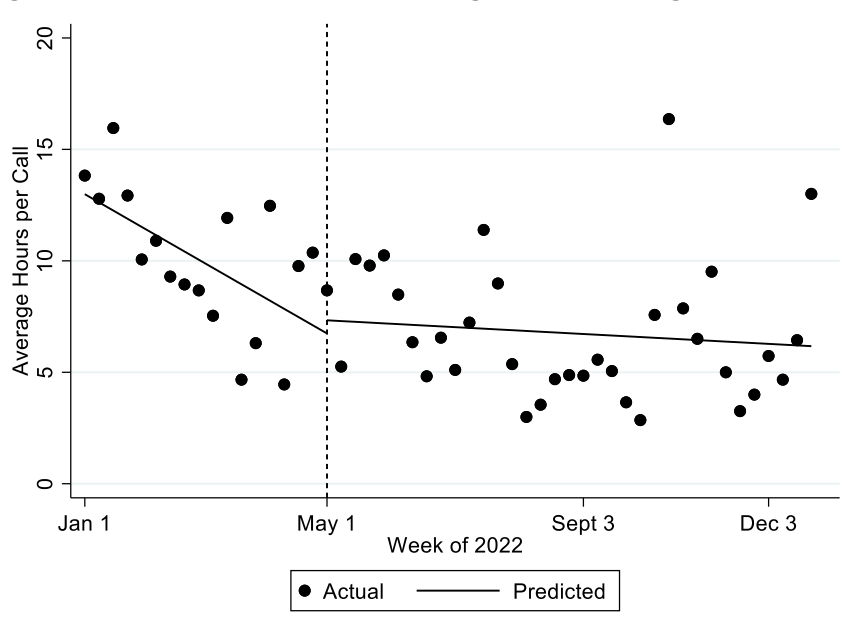
Source: Authors' analyses of WPD data. Notes: Figure shows weekly average hours per call (black dots) and predicted trend lines from ITSA regression analysis of EDO calls from January-December 2022, with ***p<.01, **p<.05.

Table 1. Interrupted Time Series Results for EDO and SUICP Calls, January 2022-December 2022

Panel A. Emergency Detention Orders (EDOs)

	Number of Calls	Hours on Call	Hours per Call	Total Cost	Cost per Call
Overall Time Trend	-.145	-4.014**	-.368***	-139.064**	-12.728***
	(.094)	(1.615)	(.123)	(55.962)	(4.263)
Change in Level, May 2022	2.283	27.510	.589	950.939	19.826
	(1.477)	(21.119)	(1.626)	(731.98)	(56.435)
Time Trend after May 2022	-.045	-.689	-.034	-23.664	-1.127
	(.044)	(.507)	(.056)	(17.618)	(1.967)
Difference in Trend after May 2022	.099	3.324	.333**	115.40	11.601**
	(.104)	(1.709)	(.137)	(59.271)	(4.752)
Pre-May Average	6.5	66.2	10.1	$2292	$348
Post-May Average	6.7	45.8	6.8	$1589	$234

Panel B. Suicide in Progress (SUICP)

	Number of Calls	Hours on Call	Hours per Call
Overall Time Trend	.118	-.793	-.088
	(.164)	(.802)	(.063)
Change in Level, May 2022	1.249	15.222	.764
	(2.034)	(13.932)	(.632)
Time Trend after May 2022	-.017	-.489	-.022
	(.083)	(.542)	(.018)
Difference in Trend after May 2022	-.134	.303	.066
	(.183)	(.989)	(.066)
Pre-May Average	17.1	44.7	2.7
Post-May Average	19.1	44.5	2.3

Source: Authors' analyses of WPD data. Notes: Table shows coefficients from ITSA regression analysis of EDO and SUICP calls from January-December 2022, with ***p<.01, **p<.05.

For SUICP calls (Tabel 1, Panel B), which averaged 17 per week prior to May and 19 per week in May and after, no statistically significant changes in trends in the number of calls, total hours on calls, or the average hours per call were evident in the aggregate data.

As noted, these results have several limitations and so we turn to difference-in-differences analyses to further examine the impact of the WPD intervention facilitated by the SRC funded by Waco Connect. Figure 2 shows the trends in average hours on call from May to September for Groups A and B. In May, when Group A had implemented the new procedures but Group B was practicing business as usual, and both were collecting data on their call outcomes, Group A had an average time per call of 3.2 hours, while Group B had an average of 7.4 hours. The figure clearly indicates that upon implementation, Group B's average monthly dropped immediately. Group A and B hours per call were otherwise very similar with the exception of August where Group B had slightly higher average hours per call. A t-test of differences in the two groups' mean hours per call indicated that the May difference was statistically different from zero with $p<.05$, but not in any other months. This held both before and after the removal of two outlier calls with more than 49 hours spent. This suggests that time spent converged between the two groups following Group B's implementation of the new procedures.

Figure 2. Average Monthly Hours per Call, May 2022-September 2022
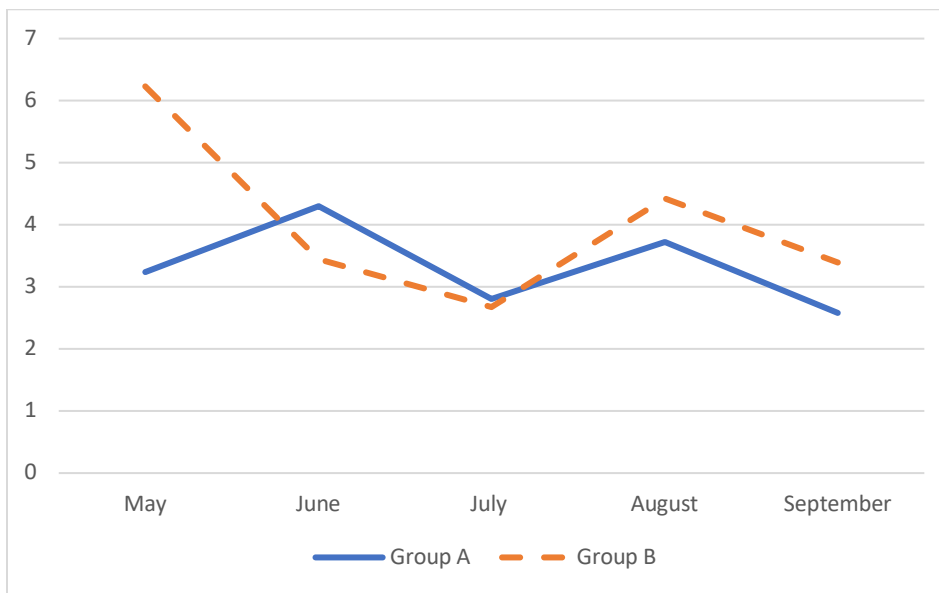
Source: Authors' analyses of WPD data. Notes: Figure shows monthly hours per call for groups A (solid) and B (dashed) from May to September, 2022; Group A implemented the new procedure in May with Group B implementing in June.

In order to formalize this and estimate the impact of the Group B implementation, we estimated the difference between Group A and Group B before and after Group B's implementation in a regression. These results are available in Table 2, which shows the estimated difference between the two groups overall, the estimated difference in the post-implementation period, and the difference-in-differences estimate. We can see that this analysis may be important because Group B was, during May, averaging more hours on call with a higher cost, and was less likely to call ICARE, prior to implementing the new procedures.

The Table 2 results show that relative to Group A, Group B hours per call declined by 2.8, with a corresponding decline in cost per call of $98. Interpreting the Group B average as representative of the prior baseline, this suggests a 45% decline in hours per call and cost per call – a significant shift in police resources for these types of calls. Taken across the average number of monthly calls, which was approximately 72, we obtained a lower bound estimate of more than $7000 per month from just this adjustment to procedure. Further analyses (not included in the table) suggested these results are strongest in calls for SUICP and show no differences across whether the call was dispatched during business hours or not.

There was no change in the likelihood of calling ICARE. In the raw averages, Group B was more likely to call ICARE after implementing the new procedures in June, but as Group A was also trending up, the increase relative to Group A was not statistically significant. Group B remained less likely to call ICARE overall.

Table 2. Difference-in-Differences Estimates of Impact of Group B New Procedures

	Hours per Call	Cost per Call	ICARE Called	MCOT Called	Psych Eval	Basic Medical	Referred Hospital
Group B	2.992**	103.676**	-0.245*	-0.17	0.183	0.106	-0.023
	(1.045)	(36.228)	(0.102)	(0.094)	(0.104)	(0.105)	(0.095)
Post-Period	0.261	9.06	0.129	0.155*	0.324**	0.263**	0.217**
	(0.832)	(28.822)	(0.081)	(0.075)	(0.083)	(0.083)	(0.075)
Difference-in-differences	-2.819*	-97.694*	0.062	-0.045	-0.251*	-0.205	-0.119
	(1.242)	(43.031)	(0.121)	(0.111)	(0.124)	(0.124)	(0.112)
Group B Baseline	6.2	216	.16	.11	.41	.51	.16
% Change	45%	45%	-	-	61%	-	-
N (Calls)	307	307	307	307	307	307	307

Source: Authors' analyses of WPD data. Notes: Table shows coefficients from difference-in-differences regression analysis of mental health related calls from May-September 2022, with ***p<.01, **p<.05.

In addition to police time and costs, Table 2 considers some measures recorded by the WPD of whether ICARE and MCOT were called, whether a psychological evaluation (psych eval) was performed, whether basic medical screening was performed, and whether the subject was referred to a hospital. With the exception of psychological evaluations, none of these measures show a differential change in Group B compared to Group A during the time period. All except ICARE show a statistically significant higher average in the post-intervention period than in May for both groups (shown by the Post-Period coefficient). This higher average suggests that the likelihood that subjects received these services was trending up following the change in procedure, but was not differential between Groups A and B. The results suggest a small decline in the relative likelihood the subject received a psychological evaluation. The reason for this result is that proportion of subject calls in Group A was initially low (in May) and increasing, and

increased by less in Group B. We do not think it should be interpreted causally due to the strong trend in Group A.

Conclusion

In our study of the Waco Connect partnership with the Waco Police Department (WPD), which embedded a social resource coordinator in the WPD, we assessed whether the WC project reduced emergency detention orders and police call-outs. In our analyses of call-level data from the WPD, we do not find overall declines in EDOs or call-outs, but we do show that less police time was needed in response to behavioral health calls following the implementation of new procedures designed in collaboration with the SRC. Overall, these results support the WPD conclusion that investment in the SRC made sense from a police time perspective. The estimated reduction in police hours on call from just the procedure change studied here justify the SRC's salary before considering the additional services the SRC could offer the department.

Evaluation faced several limitations. First, our ability to interpret these results causally is limited to the extent that it relies on the assumption that the month of May provides a sufficient control baseline. Evaluators did not have input into the design of the intervention and gold standard methods for causal inference (e.g. randomized controlled trial) were not performed. However, the WPD team was innovative in implementing their own version of an A-B test and as such, we do think it provides credible evidence as a pilot. Second, our ability to measure outcomes for individuals, such as re-arrest, or health care utilization, was limited by a lack of available data; efforts to engage the local hospitals to share data were not successful. For this reason, we are unable to interpret these results as improving outcomes for individuals. However, from the WPD explanation of how officer time was previously being spent waiting with the subject individuals, we can infer that at a minimum, time to treatment likely decreased substantially for the patients.

Overall, these results support the idea that partnerships between police departments and social resource coordinators can collaborate in ways that increase efficiency of police time use and ensure members of the public in need of behavioral health services get to treatment in a health care facility on a reduced timeline. A need for continued development and innovation in such partnerships and outside evaluation can provide stronger evidence. Improved evaluation designs, such as randomized controlled trials, combined with early involvement of evaluators to support data collection and quick turnaround data, can facilitate decision-making on the ground for both police departments and community stakeholders. Simply connecting with a social worker may not be enough to change individual outcomes—but viewing the social worker as a knowledgeable partner to develop new strategies and procedures, police departments may be better able to support the individuals representing the increasing caseloads with social care needs and improve their capacity to handle both these types of cases and more traditional crime fighting and deterrence roles.

References

Bonfine, N., Ritter, C., & Munetz, M. R. (2014). Police officer perceptions of the impact of crisis intervention team (CIT) programs. International journal of law and psychiatry, 37(4), 341-350.

Bonfine, N., Wilson, A. B., & Munetz, M. R. (2020). Meeting the needs of justice-involved people with serious mental illness within community behavioral health systems. Psychiatric Services, 71(4), 355-363.

Braveman, P., & Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. Public health reports, 129(1_suppl2), 19-31.

Burns, M., & Dague, L. (2023). In-Kind Welfare Benefits and Reincarceration Risk: Evidence from Medicaid (No. w31394). National Bureau of Economic Research.

Caruso, G., 2017. Public Health and Safety: The Social Determinants of Health and Criminal Behavior. UK: ResearchersLinks Books.

Frank DA, Neault NB, Skalicky A, Cook JT, Wilson JD, Levenson S, et al. Heat or eat: the Low Income Home Energy Assistance Program and nutritional and health risks among children less than 3 years of age. Pediatrics. 2006;118(5):e1293–302. pmid:17079530.

Green, T. M. (1997). Police as frontline mental health workers: The decision to arrest or refer to mental health agencies. International journal of law and psychiatry, 20(4), 469-486.

Griffin, P. A., Heilbrun, K., Mulvey, E. P., DeMatteo, D., & Schubert, C. A. (Eds.). (2015). The sequential intercept model and criminal justice: Promoting community alternatives for individuals with serious mental illness. New York: Oxford University Press. DOI: 10.1093/med:psych/9780199826759.001.0001

Gottlieb, L. M., Hessler, D., Long, D., Laves, E., Burns, A. R., Amaya, A., ... & Adler, N. E. (2016). Effects of social needs screening and in-person service navigation on child health: a randomized clinical trial. *JAMA pediatrics*, *170*(11), e162521-e162521.

Holdaway, S. (1986). Police and Social Work Relations—Problems and Possibilities. The British Journal of Social Work, 16(2), 137–160. http://www.jstor.org/stable/23705267

Jacobs, L. A., Kim, M. E., Whitfield, D. L., Gartner, R. E., Panichelli, M., Kattari, S. K., ... & Mountz, S. E. (2021). Defund the police: Moving towards an anti-carceral social work. Journal of Progressive Human Services, 32(1), 37-62.

Lamb, H. R., & Weinberger, L. E. (2017). Understanding and treating offenders with serious mental illness in public sector mental health. Behavioral Sciences & the Law, 35(4), 303-318.

National Academies of Sciences, Engineering, and Medicine. (2019). Investing in interventions that address non-medical, health-related social needs: proceedings of a workshop.

S. Rebecca Neusteter, Megan O'Toole, Mawia Khogali, Abdul Rad, Frankie Wunschel, Sarah Scaffidi, Marilyn Sinkewicz, Maris Mapolski, Paul DeGrandis, Daniel Bodah, and Henessy Pineda. (2020). Understanding Police Enforcement: A Multicity 911 Analysis. New York: Vera Institute
of Justice. https://www.vera.org/downloads/publications/understanding-police-enforcement-911-analysis.pdf

Nichols, L. M., & Taylor, L. A. (2018). Social determinants as public goods: a new approach to financing key investments in healthy communities. Health Affairs, 37(8), 1223-1230.

O'Dell, H. (2022, February 25). Should social workers work with police? Jury's out. Capital News Service. https://news.jrn.msu.edu/2022/02/should-social-workers-work-with-police-jurys-out/

Pantell, M. S., Hessler, D., Long, D., Alqassari, M., Schudel, C., Laves, E., ... & Gottlieb, L. M. (2020). Effects of in-person navigation to address family social needs on child health care utilization: a randomized clinical trial. *JAMA Network Open*, *3*(6), e206445-e206445.

Patterson, G. T., & Swan, P. G. (2019). Police social work and social service collaboration strategies one hundred years after Vollmer: A systematic review. Policing: An International Journal, 42(5), 863-886.

Prins, S. J. (2014). Prevalence of mental illnesses in US state prisons: A systematic review. Psychiatric Services, 65(7), 862-872.

Puntis, S., Perfect, D., Kirubarajan, A., Bolton, S., Davies, F., Hayes, A., ... & Molodynski, A. (2018). A systematic review of co-responder models of police mental health 'street'triage. BMC psychiatry, 18(1), 1-11.

Richmond, M., & Gibbs, J. C. (2021). Police perceptions of training on interactions with persons with mental illness. Journal of police and criminal psychology, 36, 268-275.

Rotter, M., & Compton, M. (2022). Criminal legal involvement: a cause and consequence of social determinants of health. Psychiatric services, 73(1), 108-111.

Sadowski, L. S., Kee, R. A., VanderWeele, T. J., & Buchanan, D. (2009). Effect of a housing and case management program on emergency department visits and hospitalizations among chronically ill homeless adults: a randomized trial. *Jama*, *301*(17), 1771-1778.

SAMHSA. (2019). Data collection across the sequential intercept model (SIM): Essential measures. Gains Action Brief. Publication #PEP19-SIM-DATA.

Shapiro, G. K., Cusi, A., Kirst, M., O'Campo, P., Nakhost, A., & Stergiopoulos, V. (2015). Co-responding police-mental health programs: A review. Administration and policy in mental health and mental health services research, 42, 606-620.

Stone, M. (2019). Embedded police social workers. Community Policing Dispatch, U.S. Department of Justice, Volume 14, Issue 8. https://cops.usdoj.gov/html/dispatch/08-2021/police_social_workers.html

Watson, A. C., Compton, M. T., & Draine, J. N. (2017). The crisis intervention team (CIT) model: An evidence-based policing practice?. Behavioral Sciences & the Law, 35(5-6), 431-441.

Wood, J. D., Watson, A. C., & Barber, C. (2021). What can we expect of police in the face of deficient mental health systems? Qualitative insights from Chicago police officers. Journal of Psychiatric and Mental Health Nursing, 28(1), 28-42.

Appendix A

Mental Health/ Transport Callout Form

Date- Time Initiated
_____

Case information

_____   _____
Case Number   Sequence Number

Name

_____   _____
First   Last

Response   ☐ EDO ☐ Voluntary Commit (MCOT)   ☐ Voluntary Commit (PD)   ☐ Jail   ☐ AMR (Medical)

Body worn camera activated?   ☐ Yes   ☐ No

Was ICARE/MCOT called?   ☐ Yes   ☐ No   ☐ N/A   Time Called   _____

Did MCOT respond?   ☐ Yes   ☐ No   ☐ N/A   Responded Time   _____

Paladin Time Requested   Paladin Responded Time
_____   _____

Where was medical clearance completed?   ☐ CTC   ☐ Providence   ☐ Hillcrest   ☐ N/A
If not completed at the CTC why?

_____

Was individual triaged/Psych Eval done CTC?   ☐ Yes   ☐ No   ☐ N/A
Was individual referred to a hospital?   ☐ Yes   ☐ No   ☐ N/A

If referred why?   ☐ Verbally aggressive to staff   ☐ Physically aggressive to staff   ☐ Damaging property   ☐ Medical

Other   _____

Were they medicated by staff?   ☐ Oral   ☐ Injection   ☐ None

Primary Officer (Please Print)   Secondary Officer (Please Print
_____   _____

Case worker Name
_____

ICARE
1-866-752-3451

16