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RESEARCH ARTICLE



Mental health co-responder programs: assessing impacts and estimating the cost savings of diversion from hospitalization and incarceration

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ABSTRACT

To better serve people with mental illness (PWMI), law enforcement agencies have considered programmatic alternatives to arrest, transport, or informal guidance. The police-clinician, co-responder model represents one such approach that promises cost-saving deflections. This study examines a co-responder program led by specially trained police officers and mental health professionals embedded in the New Castle County Division of Police (NCCPD). It evaluates program impacts and cost savings from diversions from hospitalization and formal criminal processing. Results show that NCCPD's Behavioral Health Unit contributed to a growing average number of confirmed connections to care per quarter. Diversions from the emergency room ($n = 97$) and incarceration ($n = 120$) contributed to cost savings of \$2.8 million since the program's inception, or over a quarter million dollars per quarter. Findings highlight the ability of co-responder models to successfully divert PWMI out of health and justice systems while diminishing associated costs.

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As first responders, law enforcement officials make important decisions beyond enforcing the law when interacting with citizens who may be dealing with mental health issues (Beck et al., 2020; Reuland et al., 2009; A. Watson et al., 2019). Nearly one in five calls for police service in the United States involve a mental health or substance use-related issue (Abramson, 2021; Westervelt, 2020), challenging officers to resolve the situation through more proactive ways that curtail subsequent criminal justice contact (Krider et al., 2020). Police encounters with people with mental illness (PWMI) typically result in one of three outcomes: arrest, transport to a medical facility (e.g., emergency room), or informal counseling (Akins et al., 2016). While arrests may be the least common resolution of these interactions (Todd & Chauhan, 2021), PWMI face disproportionate rates of formal criminal processing and incarceration (Lurigio, 2001; White et al., 2006). In some states, the population of PWMI in state jails and prisons is greater than three times that of hospitals (Torrey et al., 2010). At the same time, contact with law enforcement can lead to a connection to care. Nearly one in ten PWMI had police involved in their pathway to mental health care (Livingston, 2016). Approximately \$918 million in law enforcement budgets is spent on transporting PWMI to care programs (Treatment Advocacy Center, 2019). Carefully designed law

enforcement responses may leverage this ‘dual role’ of police in ways that improve public safety and access to supportive services (Krider et al., 2020).

Police-clinician co-responder programs have become an emerging model for law enforcement to address the needs of PWMI (Kuehl et al., 2024; Shapiro et al., 2015; Shefner et al., 2023). These initiatives combine specialized training of officers associated with Crisis Intervention Teams (CIT) and on-site responses by mental health professionals associated with civilian, mobile crisis teams (MCTs) (A. Watson et al., 2019). Co-response models aim to decrease arrests, hospitalizations, and calls for service, effectively diminishing the costs incurred through traditional processing in the criminal justice and health systems (Puntis et al., 2018). While CIT training and MCT programs have associated cost productions, less attention has been paid to shifts in police decision-making and their cost implications as a result of co-responder interventions.

This study explores the impacts of the New Castle County Division of Police (NCCPD’s) Behavioral Health Unit (BHU). It examines shifts in calls for service and diversions from incarceration and emergency rooms. It then estimates the cost savings of these efforts through publicly available data on expenditures and resource utilization. Such a cost analysis helps us to approximate the expense of traditional responses in the absence of BHU-led diversions. This study thus seeks to disseminate the practices of an emerging co-response model as well as provide a framework for estimating cost savings of diversions that other agencies can adopt.

The co-responder approach by law enforcement

Law enforcement agencies undertake a few core strategies when interacting with PWMI. Interventions often target connecting people to care within local communities before police contact begins (i.e., intercept 0) and opportunities for diversion in lieu of arrest when police response occurs (i.e., intercept 1 of the Sequential Intercept Model) (SAMSHA, 2020). The Sequential Intercept Model highlights the importance of police as both bridges to community services and initiators of formal criminal justice sanctions (Krider et al., 2020).

Agencies can rely on a repertoire of common techniques that involve mental health training to help officers better distinguish and communicate with PWMI, notification and flagging systems that apprise officers of individuals’ needs, and case management systems that identify and respond to those who frequently utilize police services (Akins et al., 2016; A. Watson et al., 2019). Sometimes other agencies, such as fire departments and emergency medical services (EMS) (Hector & Khey, 2018), or individuals, such as peer specialists (Hepner et al., 2015), co-develop interventions to support behavioral health service uptake and service utilization.

Co-responder models are an increasingly popular approach that formalized efforts by police departments to serve PWMI (Shapiro et al., 2015). Under this model, at least one police officer and a civilian mental health professional jointly respond to calls for service (A. Watson et al., 2019). Co-response can occur with the pair sharing the same vehicle, arriving at a scene together, or having the mental health provider support the officer remotely via phone, radio, or another telehealth device (Puntis et al., 2018). Police officers participating in these efforts typically undertake mental health training to better understand circumstances and engage clinicians. Co-response teams conduct ‘street mental health triage,’ effectively incorporating mental health expertise into police discretion in how to resolve incidents (Kirubakaran et al., 2018). These teams initiate screening or assessment processes in light of an individual’s history at the scene and later support clients through follow-ups to encourage engagement in treatment and services (Krider et al., 2020).

Co-responder models combine elements of Crisis Intervention Training (CIT) and mobile crisis intervention (MCI) teams that have dominated criminal justice and public health responses to mental illness. The CIT model is a police-based approach that involves training police officers to assist individuals in crisis and directly connecting those in need of emergency and treatment evaluation to a psychiatric care facility (Steadman et al., 2001; A. C. Watson & Fulambarker, 2012). Developed in 1988 by the Memphis Police Department, the training component features

40 hours of experimental and practical education led by mental health professionals, families and persons impacted by mental illness, community advocates, and other police officers. Officers come out of training with knowledge of mental health disorders and co-occurring disorders, treatment and referral options, effective interactions, and de-escalation techniques (Compton et al., 2014). Many officers participating in co-responder programs receive CIT training (Yang et al., 2024). By contrast, a mobile crisis intervention team is a non-police-based approach (Scott, 2000). Led by a state or local government agency, community organization, or another behavioral health provider, MCIs assess incoming calls and deploy a mental health professional to intervene in crises where the person is located. Once a situation has stabilized, MCI teams decide on the next steps such as transport or referral to services. MCI teams tend to perform short-term follow-ups after crisis resolution (A. Watson et al., 2019).

Co-responder programs have several aims that seek to diminish the involvement of PWMIs in the criminal justice system. Through enhanced collaboration with behavioral health systems, the model intends to reallocate officer time and resources in ways that improve access to care. A successful program should decrease arrests, incarceration, hospitalization, and repeat calls for services. It is also possible to see reductions in the use of force by law enforcement, as officers and clinicians become more sensitive to mental health concerns (Krider et al., 2020; Reuland et al., 2009).

The effectiveness of police-clinician co-responder models in changing outcomes is debated, especially within systemic reviews of the co-responder literature (Puntis et al., 2018; Seo et al., 2021; Shapiro et al., 2015). Seo et al. (2021)'s meta-analysis of 11 co-responder studies reports a range of effect sizes with these programs 'substantially' reducing mental health-related detentions (e.g., Section 136), but 'moderately' increasing diversions and 'negligibly' diminishing arrests and use of force incidents (p. 11). In a similar review of 21 reports, dissertations, and peer-reviewed articles, Shapiro et al. (2015) make the modest claim that 'there is some evidence that this program model has the potential to forge linkages with community services and mitigate the burden on the justice system' (p. 615–616). Largely, this claim is based on reduced 'downtime' officers spent on mental health service calls and positive perceptions of the program among clients and officers. Puntis et al. (2018) take a harder line, asserting a lack of randomized controlled trials means 'there is a striking lack of evidence for the effectiveness of co-response models of triage despite the substantial investment these services have received' (p. 9). Recent examples of controlled studies of co-response programming, such as Yang et al. (2024), found no meaningful differences in subsequent police calls, frequency of treatment use, and duration of treatment services among populations with and without programmatic intervention. Still, qualitative studies underscore shifts in key attitudinal outcomes, such as officer buy-in, citizen or family member satisfaction with police intervention, or quality of provider/police communication, and core challenges, such as negotiating practical challenges of connecting individuals to care (e.g., locating open treatment beds), that mediate programmatic success (e.g., Harmon-Darrow et al., 2023).

While potentially modest in affecting the incidence of 'observed' behavioral outcomes like arrest or hospitalization or altering the attitudes of program participants or providers, co-responder programs may yield considerable savings after considering the estimated costs of these outcomes to the public health and criminal justice system. Growing research on CIT and MCT programs has underscored significant cost reductions to communities. For example, a pre-booking program in Bexar, Texas operating from 2003–2005 decreased arrest and treatment costs by a projected \$2,835 per person, amounting to \$1.3 million in taxpayer savings over two years (Cowell et al., 2013). Similar reductions in hospital care and criminal processing appeared in Lexington, Kentucky (El-Mallakh et al., 2014). The Memphis CIT program diminished the costs of jail time by \$384 per person, though diverted individuals reportedly incur higher treatment costs due to inpatient treatment (Cowell et al., 2004). Another crisis intervention initiative reported savings of \$43,000 in hospitalization over a six-month period, which included shorter stays and fewer future hospitalizations among individuals with severe mental health diagnoses (Bengelsdorf et al., 1993). Even

brief training sessions related to mental health may have positive impacts on cost savings. To illustrate, a 1-day training program composed of vignettes involving individuals with various psychiatric disorders was shown to diminish the costs of officer time in responding to mental health-related calls for service and the costs of force use during police interactions in Alberta, Canada (Krameddine et al., 2013). MCTs also produce cost savings. For instance, an early study showed the DeKalb County, GA MCT decreased psychiatric hospitalizations by over 50% and decreased overall program costs due to reductions in police time (Scott, 2000). Further study of whether and how co-responder programs yield cost savings are warranted, as practitioners can communicate the economic impacts of their work in conjunction with narratives, changes in beliefs among PWMI and officers, and (potentially modest) behavioral shifts in contact with the criminal justice and public health systems.

Current study

This study examines the outcomes and cost-savings of a co-responder program known as the Behavioral Health Unit run by the New Castle County Division of Police (NCCPD) in Delaware between 2020 and 2023. NCCPD is based in New Castle County, Delaware, the state's most populated county (575,494 residents). The county has a predominantly White (62%), educated (95% of the population is a high school graduate or higher), and affluent (median household income = \$85,309; poverty rate = 10.1%) population (U.S. Census Bureau, 2023). NCCPD services unincorporated towns and municipalities outside of the city of Wilmington, DE (U.S. Census Bureau, 2023).

Both the State of Delaware and communities within New Castle County face serious challenges with mental illness and substance misuse. According to the Delaware Division of Substance Abuse & Mental Health (DSAMH), 17% of community members (i.e., 123,300 adults) have been diagnosed as having a mental health issue (Delaware Public Health Institute, 2016). Of Delawareans with a mental health diagnosis, more than one-third (i.e., 46,000 adults) are not currently receiving treatment for their condition. Substance use disorders affect approximately 9.6% of the State's population (Substance Abuse and Mental Health Services Administration, 2020). Co-occurrence of mental health and substance use is a growing concern (SAMSHA, 2021).

NCCPD received funding from the Bureau of Justice Assistance's Justice and Mental Health Collaboration Program (2017-MOBX0043). The initiative supports partnerships between criminal justice and mental health sectors to plan, implement, and expand collaborative programs supporting individuals presenting with mental health issues as well as those with co-occurring mental health and substance use disorder symptoms (Bureau of Justice Assistance, 2024). NCCPD leadership had already taken an interest in diversion/deflection programming at this time, notably developing a treatment referral program known as Hero Help (Donnelly et al., 2022; Streisel et al., 2019).

NCCPD's Behavioral Health Unit (BHU) consists of a police officer and a Mental Health Professional (MHP). It best represents a co-response model. The team responds to 911 calls together and subsequently assesses individuals for an emergency petition or a referral. The police officer receives immediate insight from the MHP on communication techniques and shifts in an individual's behavior to maintain the safety of everyone involved. According to NCCPD crime analysts, NCCPD experienced a 45% decrease in calls for service and a 41% decrease in repeat calls in 2018, suggesting an expanded BHU could have a remarkable impact on incidents involving people experiencing mental health issues.

To increase public safety and reduce recidivism among high-risk people with mental illnesses (MI) and co-occurring mental illness and substance abuse (CMISA), the NCCPD proposed to grow an Addiction and Behavioral Health Unit (ABHU), consisting of the Hero Help and BHU programs. The Division proposed expanding the coverage of the BHU and acquiring a better understanding of the training needed to establish a department-wide specialized response. This

resulted in their successful application to the FY23 Justice and Mental Health Collaboration Program (O-BJA-2023-171522).

Under the BJA grant, the BHU made several key programmatic developments. The BHU first created a specialized case management system using REDCap, a free and secure web application that manages databases. REDCap is fully customizable, allowing stakeholders to construct their own forms, surveys, and system records to be hosted on the agency's or organization's server. The system further permits stakeholders to aggregate, deidentify, and share data based on original records. For example, a police officer for the BHU can provide a snapshot of the total number of dispatches within a time interval to their supervisors or evaluation team.

The REDCap system for the BHU begins tracking information about an individual presenting with possible MI/CMISA symptoms as soon as a 911 call for service occurs. The system records an individual's demographic information, current photograph, living situation, mental health condition, triggers of emotional responses, prescribed medications, and strategies to improve communication. REDCap further documents encounters with law enforcement through calls for service, follow-ups, and referrals to care. The BHU then introduced specialized and comprehensive training for officers to respond to incidents involving people with mental illness. Such training combined lessons from CIT and the Police Mental Health Collaboration Model.

Most importantly, the BHU enhanced its service coordination services for people who were not connected to care, have more significant mental health needs, or otherwise experience higher risks for criminal offending. The BHU partnered with 13 different agencies to provide more intensive case management and improve public safety. These agencies include the U.S. Department of Veterans Affairs, NAMI (National Alliance on Mental Illness), Delaware Mental Health Court, State Department of Aging, Unite Delaware, and SARC (Support, Advocacy, and Resource Center for Victims and Survivors of Domestic Violence). For those with co-occurring substance use disorders who encountered NCCPD, individuals could be connected to the clinician, nurse, child-victim advocate, case manager, and officers affiliated with the Hero Help Program (Donnelly et al., 2022). All individuals participating in Hero Help are evaluated for mental health issues using a clinical assessment administered by a licensed counselor, regardless of a previous mental health diagnosis. Following an evaluation's determination of whether substance use or mental health is the predominant factor in criminal justice involvement, a disciplinary specialist from Hero Help or the BHU takes the lead in managing the care of the impacted individual.

Data

To begin to assess the impacts and cost savings of the BHU, this study uses data from original case management records collected by NCCPD's BHU. All data were collected in REDCap based on the NCCPD server. The system organizes BHU responses from initial 911 dispatches and initial decisions at the scene (e.g., emergency room transport or arrest) to referrals to care and follow-up events. Once an individual makes contact with the BHU, their information is retained in the REDCap database. Deidentified data were shared with the research team.

The research team involved with this study subsequently aggregated call, diversion, and referral data into quarterly counts between 2020 and 2023. We identify the number of diversions from the criminal justice and health care systems based on the date of service by the police department. During the 33 months of study, the BHU responded to an average of 43 mental health-related calls per month within its jurisdiction.

Method

Our study uses two sets of measures to describe the impacts of the BHU. We first present a series of descriptive statistics that document call, referral, and diversion activities over time. After being dispatched, BHU team members use their discretion to formulate an appropriate response. They

determine whether an arrestable offense occurred (e.g., an individual who physically attacked a group home employee during a mental health crisis is considered to have committed assault) as well as whether the individual needs medical care or additional behavioral health support services. If an arrestable offense did not occur, co-responders considered incarceration diversion to be not applicable. If an arrestable offense did occur, but the BHU staff were able to mediate the situation without placing the individual into custody, then the encounter was considered to be an incarceration diversion. If the responding team reported arresting an individual in response to an alleged crime, then the person was considered not diverted. If the individual did not need medical care or other behavioral health support services, co-responders considered hospital diversion to be not applicable. The BHU team sought to connect individuals with unmet behavioral health needs to appropriate care through various means; this may involve providing informal counseling, calling the individual's support person (i.e., case manager), or transporting the individual to a crisis intervention service provider. If an individual was connected to appropriate care without being hospitalized, the encounter was considered to be an emergency room diversion. If the individual's needs cannot be met (i.e., no vacancies at treatment centers), then they may be transported to the emergency room thus considering them not diverted.

Secondly, we introduce estimates of cost savings associated with BHU-based diversions from criminal justice and healthcare systems. To calculate cost savings associated with the BHU, we developed a set of calculations to generate the cost per deflection for various aspects of criminal processing and hospitalization. We take an expenditure approach to determine the average cost per arrest, processed court case, and incarceration stay. We relied on the Urban Institute Tax Policy Center's (2023) State and Local Government Finance Data website to quickly gather information on criminal justice expenditures in Delaware at the time of the BHU's operations. The website presents expenditure data for all fifty states and certain localities as per the U.S. Census Bureau's Annual Survey of State and Local Government Finances. Similar estimates can be found through the Bureau of Justice Statistics' Justice Expenditure and Employment Extracts series, as these derive from the same official expenditure data sources (Bureau of Justice Statistics, 2019). This expenditure-based approach follows the approach of health economists examining the costs of criminal justice contact associated with substance use and mental health disorders (for example, see Florence et al., 2016; Zajac et al., 2019), especially when detailed, locality-based estimates per diem may be less available from stakeholders (for example, see Leifman & Coffey, 2020 for per diem estimates of jail, or Cowell et al., (2013) for county-specific arrest estimates).

For arrests, we adopted cost estimates used by the National Juvenile Justice Network's (NJJN's) Fiscal Policy Center. With support from the MacArthur Foundation's Models of Change Initiative, this arrest cost toolkit sought to initiate more discussions and estimations of cost savings across jurisdictions engaging in practices aiming to reduce arrest rates (Chaidez, 2012). We first located Delaware's total expenditures on law enforcement (Urban Institute Tax Policy Center, 2023). We then identified the number of police and sheriff's patrol officers in the State of Delaware reported to the Bureau of Labor Statistics Occupational Employment and Wage Statistics (2023). We divide total law enforcement expenditures by the number of officers to determine an annual amount of dollars in police officer salaries and support. We then divide this amount by the number of working hours in a year (i.e., 2080). Lastly, we multiply this amount by the average number of hours it takes a single officer to make an arrest (i.e., six hours, according to Chaidez, 2012, though other studies have indicated arrests can span up to 13.5 hours with investigation, case filings, and administrative review per Fain et al., 2010). The result is an average cost per arrest in New Castle County, Delaware.

We use a similar strategy for judicial processing costs. Specifically, we modify Vera Institute of Justice's marginal cost calculation approach that relies on court expenditure data and case type to arrive at costs per case (Henrichson & Sarah Galgano, 2013). We first identified criminal court filing costs and fees in the Court of Common Pleas and Superior Courts in Delaware (Delaware Courts, 2023). For instance, Superior Court levies a \$80 fine per case handled in its courtrooms. Next, we

found the total number of case filings in 2020 for New Castle County Superior Court ($n = 1,678$) and its Court of Commons Pleas ($n = 5,499$), based on the Delaware Administrative Office of the Courts (2020)'s annual report. We then located expenditures for New Castle County's Court of Common Pleas and Superior Court through the State of Delaware (2020)'s Open Checkbook website. We adjust for the ratio of cases being handled in each court. Then, we calculate the average costs of judicial processing with fines in each court. The result is an average cost per case handled in the courts.

Finally, we develop incarceration costs per average length of stay in jail and prison in Delaware. While Delaware has a unified correctional system, we differentiate jail and prison based on the Delaware Statistical Analysis Center's (2012) definition of jail referring to an incarceration sentence being less than one year and prison as an incarceration sentence of one year or more. We begin by finding the State's total expenditures on corrections, as per the U.S. Census Bureau's Annual Survey of State and Local Government Finances (Urban Institute Tax Policy Center, 2023). Next, we distinguish the size of Delaware's incarcerated population in 2020, as reported to the National Institute of Corrections (2022) (i.e., 4,710 individuals). We divide total expenditures by the number of people incarcerated and further divide this by 365 days to arrive at incarceration costs per person per day. In the next steps, we calculate the average length of stay for major charges that do not carry the most severe sentences (i.e., drug, weapon, sex, robbery, burglary, and violation of probation offenses). According to the Delaware Statistical Analysis Center (2012), the average jail stay was 5.68 days and the average prison stay was 41.29 days. We multiply these lengths of stays by incarceration costs per person, per day estimates to approximate jail and prison costs per person. To determine total criminal justice system savings, we aggregate the number of diversions from incarceration associated with the BHU, multiply this amount by each cost, and sum all costs.

Additional savings may accrue from the hospital system. These savings emerge from diversions from the emergency room and in-patient hospitalizations. We locate the cost per emergency room visit in 2020 using the Delaware Department of Health and Social Services (2023)'s Cost Aware tool. We arrive at cost savings from emergency room diversions by multiplying this per-visit cost by the total number of emergency room deflections.

For in-patient hospitalizations, we rely on hospital cost data from the U.S. Department of Health and Human Services' Healthcare Cost and Utilization Project (Agency for Healthcare Research and Quality, 2023). We average the typical length of stays and associated hospital costs in New Castle County, Delaware for ten mental health-related disorders. Such disorders include schizophrenia, bipolar disorder, anxiety and fear-related disorders, trauma and stress-related disorders, suicidal ideation, and opioid or stimulant-related disorders. Based on these calculations, the average length of stay in a hospital was 7.44 days. We get total in-patient hospitalization savings by multiplying the number of emergency room deflections by this average length of stay for mental health-related disorders times the average hospital costs.

Results

We first summarize the call, referral, and diversion activities of the BHU. Table 1 shows the total annual and average quarterly number of contacts with the BHU by type. The total and average number of outcomes for Q4 in 2020 are the same because there is only one reporting period. The table indicates that 911 dispatches involving mental health-related concerns in NCCPD's jurisdiction grew between 2020 and 2023. For example, the unit responded to 122 calls in the last quarter of 2020, but it addressed an average of 382 per quarter in 2023. This increase in calls corresponds to growth in the number of individuals involved. The table also makes clear that officers encounter the same individuals multiple times.

The table further displays the frequency of emergency room transport and arrests. Relative to the number of dispatches, informal counseling, constituting any dispatch not resulting in arrest, transportation to the emergency room, or diversion, tends to be the most frequent

Table 1. Types of contact with the behavioral health unit by year and Quarter.

Type of Contact	2020(Q4)Total & Average	2021 (Q1-Q4) Total	2021 (Q1-Q4) Average	2022 (Q1-Q4) Total	2022 (Q1-Q4) Average	2023 (Q1-Q2) Total	2023(Q1-Q2) Average
911 Dispatches	122	881	220.25	1116	279.00	764	382.00
Persons Involved	80	406	101.50	442	110.50	354	177.00
Connections to Care	59	279	69.75	298	74.50	172	86.00
Arrests	3	16	4.00	24	6.00	14	7.00
Diversions from Incarceration	15	62	15.75	33	8.25	10	5.00
Emergency Room Transports	42	89	22.50	63	15.75	64	32.00
Diversions from Emergency Room	5	50	12.50	31	7.75	11	5.50
Informal Counseling Without Arrest, Transport, or Diversion	57	663	165.75	965	241.25	665	221.67

response (46%). Emergency room transport occurred in about a third (47%, $n = 57$) of dispatches during the first quarter of the BHU's operations, yet constituted between 5–10% of dispatches in the remaining periods. Arrest is less commonly applied: only 1–2% of calls are resolved through placing a PWMI into custody.

We also see pronounced referral and diversion activities. BHU officers and staff, on average, have proliferated efforts to refer and engage people they encounter to supportive services, connecting with nearly 300 ($n = 298$) individuals receiving care in 2022. Put differently, the average number of connections to care has grown from 59 to 86 per quarter. Diversions from the emergency room peaked in 2021 with a total of 50 events, or 12.5 deflections per quarter, that year. By the middle of 2023, the team had 97 total deflections from the emergency room since 2020 or an average of 5 diversions per quarter since the initiative began. The BHU has also redirected individuals from formal criminal processing. The total number of diversions from incarceration reached a high of 62 per year in 2021. Average rates of deflection from incarceration varied per quarter, with an average of 15 deflections per quarter in 2020 to 5 deflections per quarter in 2023.

Next, we consider the effects of diversions on criminal justice and hospital system costs. Table 2 presents estimates of cost savings associated with emergency room and incarceration diversions. It first reports the total number of diversions for each category between 2020 and 2023. It then shows the costs associated with each type of diversion.

Table 2. Cost savings associated with BHU deflections from incarceration and emergency room visits.

Type of Cost	Number of Deflections	Average Cost Per Unit	Total Cost Savings
Criminal Justice Costs			
Arrest (case)	120	\$605	\$72,600
Judicial Processing (case)	120	\$5,196	\$623,520
Jail (average stay)	120	\$1,194	\$143,280
Prison (average stay)	120	\$8,678	\$1,041,360
Health System Costs			
Emergency Room (visit)	97	\$1,015	\$98,455
In-patient Hospitalization (average stay)	97	\$9,093	\$882,021
Total Cost Savings			\$2,861,236

We begin by presenting findings from the average cost per form of criminal justice processing. Each diversion from arrest saves approximately \$600 while court processing time and fees are reduced by \$5,196. Applying the average jail and prison time per case yields another reduction in incarceration costs by \$9,872. In total, we estimate that BHU-reported diversions from incarceration ($n = 120$) saved the criminal justice system over \$1.8 million since the creation of the program in 2020.

Next, we estimate changes to health system costs because of diversions. Each emergency room visit in Delaware is just over \$1,000. The average length of stay at a hospital for 10 mental health conditions at 7.44 per day is assessed at \$9,093. We approximate that the BHU-reported deflections ($n = 97$) reduced direct costs to hospitals by approximately \$980,000 in emergency room visits and in-patient stays throughout BHU programming.

Put together, BHU interventions saved criminal justice and healthcare systems approximately \$2,861,236 over the 33-month course of the program. New Castle County thus decreased direct system-related costs by approximately \$86,700 per month. Alternatively, these cost savings suggest that one deflection from the criminal justice system saves \$15,673 while one diversion from the hospital saves \$10,108.

Discussion

Issues related to mental illness challenge law enforcement to reconsider ways that agencies assist civilians in need, allocate resources, and promote public safety (Reuland et al., 2009). Co-responder models – providing a pairwise response to mental health-related calls by at least one police officer and a clinician – blend specialized training from CIT approaches and mental health professional involvement from MCTs (Puntis et al., 2018; Shapiro et al., 2015). Alternative programs to traditional arrest, transport, and informal counseling responses by police may yield reductions in health care and criminal justice costs to communities, yet evidence of the cost-effectiveness of co-responder models is limited when compared to CIT and MCT evaluations (Cowell et al., 2013; A. Watson et al., 2019). This study examined the outcomes and associated cost savings of a co-responder program led by NCCPD in Delaware from 2020–2023.

Our results conform with prior studies that arrest tends to be a rare event (Todd & Chauhan, 2021). Less than 4% of mental health-related dispatches in our data featured calls that were eligible for diversion from incarceration. When compared to the total number of arrests during this time, we can still say in the absence of the BHU's intervention the anticipated number of arrests would have been triple (i.e., $n = 177$ vs. $n = 57$). There may be limits to this counterfactual estimate, as the severity of circumstances mediates whether co-responders believe non-arrest is a viable option. Yet, these diversions appear to have large downstream effects on the cost of court, jail, and prison operations. These deflection efforts may similarly aim to diminish the overrepresentation of PWMI in secure confinement facilities (Reuland et al., 2009; White et al., 2006).

Likewise, we find that diversion can diminish transport to emergency rooms. When compared to 911 dispatches, transport rates to medical facilities sharply decreased after the introduction of the BHU, but fluctuated in average counts or about 8% of total calls during the remainder of the observation period. NCCPD began documenting incidents of service providers refusing to take a client into care during the third quarter of 2021, but these occurrences were highly unusual (e.g., only 1–2 refusals from facilities per quarter). At the same time, refusals for intake may be underreported as police officers and members of the BHU team knew clients may not be received due to limited staffing or a lack of beds. Needs for medical clearance became a larger issue for emergency room transports in 2023. Nevertheless, our findings suggest that the implementation of a co-responder model decreased emergency room transports by 38% with a cost savings of over a million dollars.

Given these results, this study points practitioners and researchers to a few policy considerations. Defining the appropriate role of law enforcement in connecting civilians to services remains a pressing question for co-responder and alternative mental health care delivery models. A co-responder approach assumes police can and should effectively intervene in acute crises given the potential dangerousness of the situation, gaps in mental health care infrastructure, and the broad scope of 'first-responder' responsibilities (Climer & Gicker, 2021; Ramasamy et al., 2023). Tensions between law enforcement and communities due to past incidents of police violence, structural racism, and intersectional personal biases, however, may raise questions about the appropriateness of co-responder models, especially when programs assist people of color with lived experiences of mental illness (Jordan et al., 2021). To the extent that people of color, with limited incomes, with mental illness, are overrepresented in police fatalities (Lett et al., 2021; Shadravan et al., 2021) and use of force incidents (U.S. Civil Rights Commission, 2018), civil rights concerns should factor into the nature and deployment of law enforcement-based mental health responses. However, interviews with youth and parents involved in a police diversion, co-responder program suggest that individuals impacted by the program reported positive perceptions of police (Magidson & Kidd, 2021). Thus, co-responder models may influence community-police relationships and improve perceptions of police legitimacy. Since qualitative analyses examining co-responder models are limited, we encourage scholars to use cost-saving metrics as one measure of co-responder model success, while also utilizing interviews and focus groups to ensure these programs effectively meet the needs of PWMI and their loved ones, responders, and the communities at-large (see recently, Shefner et al., 2023).

While our results may further inform police practice, this knowledge may apply to similarly situated police departments in terms of problem severity, geography, and resources. Mental health-related calls for service are not evenly distributed across communities: areas with predominantly White populations, high concentrations of mental health and supportive services, and high proportions of renters disproportionately have the highest call rates (Kessell et al., 2009). Co-responder models likewise require mental health professionals and police to arrive at the scene at the same time, a task that may be complicated over large geographic and more rural areas (Yang et al., 2024). While NCCPD had resource support from the Bureau of Justice Assistance, its staffing was not consistent between 2022 and 2023 and potentially led to fewer than possible referrals and follow-up contacts. As recently seen in deflection programming for substance use interventions (Donnelly et al., 2023), co-responder models may vary in deployment and success across agency, community, and regional characteristics.

The practical and empirical significance of the results further warrants additional consideration. Prior studies of co-response and other mental health intervention models indicate it is difficult to determine if a program ‘does or does not work’ as outcomes (Yang et al., 2024), or cost savings (Cowell et al., 2004) may be modest in size and direction. Qualitatively, the programs may have benefits and limitations depending on whether the perspectives of officers (Shefner et al., 2023) or family and service users (Kuehl et al., 2024) are solicited. Mental health interventions also do not necessarily guarantee long-term behavioral changes. To illustrate, our results show an increased number of individuals with confirmed connections to care, but no appreciable decrease in 911 dispatches with BHU activities. Nevertheless, co-responder models’ emphases on diversion, cross-agency collaboration, and ‘health-centered’ decision-making may make these programs socially more appealing than traditional police-led interventions.

This study has several limitations to be kept in mind. First, the cost savings may not account for all reductions in expenses associated with diversion. For example, we do not account for savings in time while a police officer accompanies an individual to the emergency department as our records did not log time spent on encounters (for an estimated cost of time savings, see El-Mallakh et al., 2014). Additionally, our encounter data lacks details that are consequential for cost savings, such as the number of individuals involved with dispatch or the number of officers that arrived at a scene. It further cannot adjust for particular costs associated with the diagnosis or treatment of mental illness. For instance, the California Legislative Analyst’s Office (2022) estimates that the State expends an average of \$23,290 on medical care, \$5,341 in psychiatric services, and \$3,156 in pharmaceuticals annually for each incarcerated person in its system. In this way, our cost estimates may be understated or conservative. At the same time, our analysis also does not represent a complete cost-benefit analysis. It does not adjust for the cost of officer training or the costs of providing care to a set of law-enforcement referred individuals. Additional associated treatment and service costs may further drive up overall programmatic costs relative to any criminal justice cost savings (Cowell et al., 2004, p. 309). Comparably, some costs may also impact taxpayers if publicly funded health insurance, such as Medicare or Medicaid, is used to cover the additional medical expenses associated with diversion like increased hospitalization. Moreover, this study cannot tell us about diversions that we did not observe in official data. While we saw an increase in the number of individuals connected to supportive services, we cannot forecast whether such referrals and engagements correspond to an unknown number of diversions from arrest, court processing, incarceration, emergency services, and hospital floors. The recency of the BHU data and relatively small sample sizes do not allow us to make strong statements about whether diversion led to better outcomes for the individual (e.g., fewer subsequent encounters with police, decreased hospital use, or greater uptake of community health services). Finally, the current study does not differentiate between initial and subsequent encounters with the BHU. While our results show far more dispatches than individuals served, it is difficult to discern whether rapport built between PWMI and police-clinician teams shapes individual outcomes. These observations emphasize the limitations of the cost savings lens in capturing the full benefits of program involvement.

In all, co-responder models like the BHU in New Castle County, Delaware may hold promise as an alternative law enforcement-based response to mental health-related calls for service. Cost savings resulting from deflections from the courts, jail, and hospital combined with a correspondingly higher number of individuals connected to supportive services indicate police-clinician teams make meaningful differences in curtailing the disproportionate criminal processing of PWMI. Continued evaluation of police-citizen relations, program feasibility, implementation across different types of communities, and long-term health and criminal justice outcomes for PWMI who engage with law enforcement through this modality will further inform the robustness of co-responder models in the future. Cost analysis may especially help officers, mental health advocates, researchers, and communities conceptualize the value of police-led deflection in changing pathways to treatment and supportive services.

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References

- Abramson, A. (2021). Building mental health into emergency responses. *Monitor on Psychology*, 52(5), 30.
- Agency for Healthcare Research and Quality. (2023). *Healthcare cost and utilization project (HCUP)*. <https://www.ahrq.gov/data/hcup/index.html>
- Akins, S., Burkhardt, B. C., & Lanfear, C. (2016). Law enforcement response to "frequent fliers": An examination of high-frequency contacts between police and justice-involved persons with mental illness. *Criminal Justice Policy Review*, 27(1), 97–114. <https://doi.org/10.1177/0887403414559268>

- Beck, J., Reuland, M., & Pope, L. (2020). *Behavioral health crisis alternative*. Vera Institute of Justice. <https://www.vera.org/behavioral-health-crisis-alternatives>
- Bengelsdorf, H., Church, J. O., Kaye, R. A., Orlowski, B., & Alden, D. C. (1993). The cost effectiveness of crisis intervention. Admission diversion savings can offset the high cost of service. *Journal of Nervous & Mental Disease*, 181(12), 757–762. <https://doi.org/10.1097/00005053-199312000-00008>
- Bureau of Justice Assistance. (2024). *Justice and mental health collaboration program (JMHCPC)*. <https://bja.ojp.gov/program/jmhcp/overview>
- Bureau of Justice Statistics. (2019). *Justice expenditure and employment extracts series*. <https://bjs.ojp.gov/data-collection/justice-expenditure-and-employment-extracts-series>
- California Legislative Analyst's Office. (2022). *How much does it cost to incarcerate an inmate?* Legislative Analyst's Office. https://www.lao.ca.gov/PolicyAreas/CJ/6_cj_inmatecost
- Chaidez, J. (2012). *How to calculate the cost of a youth arrest*. National Juvenile Justice Network. https://www.modelsforchange.net/publications/513/Toolkit_How_to_Calculate_the_Cost_of_a_Youth_Arrest.pdf
- Climmer, B., & Gicker, B. (2021). *CAHOOTS: A model for prehospital mental health crisis intervention*. 38. <https://www.psychiatristimes.com/view/cahoots-model-prehospital-mental-health-crisis-intervention>
- Compton, M. T., Bakeman, R., Broussard, B., Hankerson-Dyson, D., Husbands, L., Krishan, S., Stewart-Hutto, T., D'Orio, B. M., Oliva, J. R., Thompson, N. J., & Watson, A. C. (2014). The police-based crisis intervention team (CIT) model: I. *Effects on Officers' Knowledge, Attitudes, and Skills Psychiatric Services*, 65(4), 517–522. <https://doi.org/10.1176/appi.ps.201300107>
- Cowell, A. J., Broner, N., & Dupont, R. (2004). The cost-effectiveness of criminal justice diversion programs for people with serious mental illness Co-occurring with substance abuse: Four case studies. *Journal of Contemporary Criminal Justice*, 20(3), 292–314. <https://doi.org/10.1177/1043986204266892>
- Cowell, A. J., Hinde, J. M., Broner, N., & Aldridge, A. P. (2013). The impact on taxpayer costs of a jail diversion program for people with serious mental illness. *Evaluation and Program Planning*, 41, 31–37. <https://doi.org/10.1016/j.evalprogplan.2013.07.001>
- Delaware Administrative Office of the Courts. (2020). Annual report statistical information for the Delaware judiciary. Administrative Office of the Courts. <https://courts.delaware.gov/aoc/annualreports/fy20/doc/2020StatisticalInformationReport.pdf>
- Delaware Courts. (2023). *Fees and filings for the Delaware court of common pleas*. <https://courts.delaware.gov/help/fees/ccpfees.aspx#ccpcriminal>
- Delaware Department of Health and Social Services. (2023). *Compare cost and quality data for common outpatient services in Delaware*. CostAware | Delaware's State Health Care Costs. <https://costaware.dhss.delaware.gov>
- Delaware Public Health Institute. (2016). *Collecting and utilizing reliable, local community-based health information: An overview of the DPHI*. Delaware Health and Human Services Department. https://www.delawarephi.org/images/DPHI_DataReleasePresentation_12_7_16.pdf
- Delaware Statistical Analysis Center. (2012). Superior court sentencing report. <https://sac.delaware.gov/wp-content/uploads/sites/64/2017/04/Superior-Court-Sentencing-Report-2011.pdf>
- Donnelly, E. A., Brown, C. L., McBride, A., Beletsky, L., & Anderson, T. L. (2023). Emerging disparities in the placement of law enforcement-based treatment referral and recovery programs. *Criminal Justice Review*, 48(3), 359–376. <https://doi.org/10.1177/07340168221117109>
- Donnelly, E. A., O'Connell, D. J., Stenger, M., Arnold, J., & Gavnik, A. (2022). Law enforcement-based outreach and treatment referral as a response to opioid misuse: Assessing reductions in overdoses and costs. *Police Quarterly*, 26(4), 441–465. <https://doi.org/10.1177/10986111221143784>
- El-Mallakh, P. L., Kiran, K., & El-Mallakh, R. S. (2014). Costs and savings associated with implementation of a police crisis intervention team. *Southern Medical Journal*, 107(6), 391–395. <https://doi.org/10.14423/01.SMJ.0000450721.14787.7d>
- Fain, T., Turner, S., & Ridgeway, G. (2010). Los Angeles county juvenile justice crime prevention act: Fiscal year 2008–2009 report. RAND Corporation. https://www.rand.org/pubs/technical_reports/TR832.html
- Florence, C., Luo, F., Xu, L., & Zhou, C. (2016). The economic burden of prescription opioid overdose, abuse and dependence in the United States, 2013. *Medical Care*, 54(10), 901–906. <https://doi.org/10.1097/MLR.0000000000000625>
- Harmon-Darrow, C., Afkinich, J., Franke, N. D., & Betz, G. (2023). Police diversion at arrest: A systematic review of the literature. *Criminal Justice & Behavior*, 50(3), 307–329. <https://doi.org/10.1177/00938548221131965>
- Hector, J., & Khey, D. (2018). The front line: EMS, Law Enforcement, and probation and parole. In J. Hector & D. Khey (Eds.), *Criminal justice and mental health: An overview for students* (pp. 47–73). Springer International Publishing. https://doi.org/10.1007/978-3-319-76442-9_3
- Henrichson, C., & Sarah Galgano, S. (2013). *A Guide to calculating justice-system marginal costs*. Vera Institute of Justice. https://bja.ojp.gov/sites/g/files/xyckuh186/files/Publications/Vera_Calculating-Justice-System-Marginal-Costs.pdf

- Hepner, I., Woodward, M. N., & Stewart, J. (2015). Giving the vulnerable a voice in the criminal justice system: The use of intermediaries with individuals with intellectual disability. *Psychiatry, Psychology and Law*, 22(3), 453–464. <https://doi.org/10.1080/13218719.2014.960032>
- Jordan, A., Allsop, A. S., & Collins, P. Y. (2021). Decriminalising being black with mental illness. *Lancet Psychiatry*, 8(1), 8–9. [https://doi.org/10.1016/S2215-0366\(20\)30519-8](https://doi.org/10.1016/S2215-0366(20)30519-8)
- Kessell, E. R., Alvidrez, J., McConnell, W. A., & Shumway, M. (2009). Effect of racial and ethnic composition of neighborhoods in San Francisco on rates of mental health-related 911 calls. *Psychiatric Services (Washington, DC)*, 60(10), 1376–1378. <https://doi.org/10.1176/ps.2009.60.10.1376>
- Kirubakaran, A., Puntis, S., Perfect, D., Tarbit, M., Buckman, M., & Molodynski, A. (2018). Street triage services in England: Service models, national provision and the opinions of police. *BJPsych Bulletin*, 42(6), 253–257. <https://doi.org/10.1192/bjb.2018.62>
- Krameddine, Y. I., DeMarco, D., Hassel, R., & Silverstone, P. H. (2013). A novel training program for police officers that improves interactions with mentally ill individuals and is cost-effective. *Frontiers in Psychiatry*, 4, 9. <https://doi.org/10.3389/fpsyt.2013.00009>
- Krider, A., Huerter, R., Gaherty, K., & Moore, A. (2020). *Responding to individuals in behavioral health crisis via Co-responder models: The roles of cities, counties, law enforcement, and providers*. Policy Research Inc and National League of Cities. <https://www.theiacp.org/sites/default/files/SJCResponding%20to%20Individuals.pdf>
- Kuehl, S., Gordon, S., & Every-Palmer, S. (2024). 'In safe hands': Experiences of services users and family/support people of police, ambulance and mental health co-response. *Police Practice & Research*, 25(5), 564–578. <https://doi.org/10.1080/15614263.2024.2326832>
- Leifman, S., & Coffey, T. (2020). Jail diversion: The Miami Model. *CNS Spectrums*, 25(5), 659–666. <https://doi.org/10.1017/S1092852920000127>
- Lett, E., Asabor, E. N., Corbin, T., & Boatright, D. (2021). Racial inequity in fatal US police shootings, 2015–2020. *Journal of Epidemiology & Community Health*, 75(4), 394–397. <https://doi.org/10.1136/jech-2020-215097>
- Livingston, J. D. (2016). Contact between police and people with mental disorders: A review of rates. *Psychiatric Services*, 67(8), 850–857. <https://doi.org/10.1176/appi.ps.201500312>
- Lurigio, A. J. (2001). Effective services for parolees with mental illnesses. *Crime & Delinquency*, 47(3), 446–461. <https://doi.org/10.1177/0011128701047003009>
- Magidson, M., & Kidd, T. (2021). Juvenile diversion and the family: How youth and parents experience diversion programming. *Criminal Justice & Behavior*, 48(11), 1576–1595. <https://doi.org/10.1177/00938548211013854>
- National Institute of Corrections. (2022). *Corrections state statistics information: Delaware 2020*. <https://nicic.gov/resources/nic-library/state-statistics/2020/delaware-2020>
- Puntis, S., Perfect, D., Kirubakaran, A., Bolton, S., Davies, F., Hayes, A., Harriss, E., & Molodynski, A. (2018). A systematic review of co-responder models of police mental health 'street' triage. *BMC Psychiatry*, 18(1), 256. <https://doi.org/10.1186/s12888-018-1836-2>
- Ramasamy, R. S., Thompson, A., & Simmons, S. (2023). Responding to acute mental health crises in black youth: Is it safe to call 911? *Community Mental Health Journal*, 59(1), 1–8. <https://doi.org/10.1007/s10957-022-00980-4>
- Reuland, M., Schwarzfeld, M., & Draper, L. (2009). *Law enforcement responses to people with mental illness: A Guide to research-informed policy and practice*. Council of State Governments Justice Center. <https://csgjusticecenter.org/wp-content/uploads/2020/02/le-research.pdf>
- SAMSHA. (2020, June 29). *The sequential intercept model (SIM)*. <https://www.samhsa.gov/criminal-juvenile-justice/sim-overview>
- SAMSHA. (2021). Key substance use and mental health indicators in the United States: Results from the 2021. *National survey on drug use and health (HHS publication No. PEP22-07-01-005, NSDUH series H-57)*. Enter for behavioral health statistics and quality, substance abuse and mental health services administration. <https://www.samhsa.gov/data/report/2021-nsduh-annual-national-report>
- Scott, R. L. (2000). Evaluation of a mobile crisis program: Effectiveness, efficiency, and consumer satisfaction. *Psychiatric Services*, 51(9), 1153–1156. <https://doi.org/10.1176/appi.ps.51.9.1153>
- Seo, C., Kim, B., & Kruis, N. (2021). Variation across police response models for handling encounters with people with mental illnesses: A systematic review and meta-analysis. *Journal of Criminal Justice*, 72, 101752. <https://doi.org/10.1016/j.jcrimjus.2020.101752>
- Shadravan, S. M., Edwards, M. L., & Vinson, S. Y. (2021). Dying at the intersections: Police-involved killings of black people with mental illness. *Psychiatric Services (Washington, DC)*, 72(6), 623–625. <https://doi.org/10.1176/appi.ps.202000942>
- 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*, 42(5), 606–620. <https://doi.org/10.1007/s10488-014-0594-9>
- Shefner, R. T., Koppel, R., Wood, J., & Anderson, E. D. (2023). Co-deployment is an answer, but what are the questions? Insights from officer focus groups in Philadelphia. *Police Practice & Research*, 24(6), 728–734. <https://doi.org/10.1080/15614263.2023.2180360>
- State of Delaware. (2020). *State of Delaware open expenditures*. <https://opencheckbook.delaware.gov/#!/year/2020/>

- Steadman, H. J., Stainbrook, K. A., Griffin, P., Draine, J., Dupont, R., & Horey, C. (2001). A specialized crisis response site as a core element of police-based diversion programs. *Psychiatric Services (Washington, DC)*, 52(2), 219–222. <https://doi.org/10.1176/appi.ps.52.2.219>
- Streisel, S., O'Connell, D. J., Visher, C., & Martin, S. S. (2019). Using law enforcement to improve treatment initiation and recovery. *Federal Probation*, 83(2), 39–44.
- Substance Abuse and Mental Health Services Administration. (2020). *Behavioral health barometer: Delaware, volume 6: Indicators as measured through the 2019 national survey on drug use and health and the national survey of substance abuse treatment services*. Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/sites/default/files/reports/rpt32824/Delaware-BH-Barometer_Volume6.pdf
- Todd, T. L., & Chauhan, P. (2021). Seattle police department and mental health crises: Arrest, emergency detention, and referral to services. *Journal of Criminal Justice*, 72, 101718. <https://doi.org/10.1016/j.jcrimjus.2020.101718>
- Torrey, E. F., Kennard, A. D., Eslinger, D., Lamb, R., & Pavle, J. (2010). *More mentally ill persons are in jails and prisons than hospitals: A survey of states*. Treatment Advocacy Center and National Sheriffs Association. https://static.prisonpolicy.org/scans/treatment/final_jails_v_hospitals_study.pdf
- Treatment Advocacy Center. (2019). *Road runners: The role and impact of law enforcement in transporting individuals with severe mental illness, a national survey*. https://www.treatmentadvocacycenter.org/reports_publications/road-runners-the-role-and-impact-of-law-enforcement-in-transporting-individuals-with-severe-mental-illness/
- Urban Institute Tax Policy Center. (2023). *State and local government finance data | tax policy center*. State and Local Government Finance Data. <https://state-local-finance-data.taxpolicycenter.org>
- U.S. Bureau of Labor Statistics. (2023). *Occupational employment and wage statistics*. <https://www.bls.gov/oes/>
- U.S. Census Bureau. (2023). *U.S. Wilmington City, Delaware*. <https://www.census.gov/quickfacts/fact/table/wilmingtoncitydelaware/PST045222>
- U.S. Census Bureau. (2023). *U.S. Census bureau QuickFacts: New Castle County, Delaware*. <https://www.census.gov/quickfacts/fact/table/newcastlecountydelaware/PST045223>
- U.S. Civil Rights Commission. (2018). *Police use of force: An examination of modern policing practices*. <https://www.usccr.gov/files/pubs/2018/11-15-Police-Force.pdf>
- Watson, A. C., & Fulambarker, A. J. (2012). The crisis intervention team model of police response to mental health crises: A primer for mental health practitioners. *Best Practices in Mental Health*, 8(2), 71.
- Watson, A., Compton, M. T., & Pope, L. (2019). *Crisis response services for people with mental illnesses or intellectual and developmental disabilities: A review of the literature on police-based and other first response models*. Vera Institute of Justice. <https://www.vera.org/downloads/publications/crisis-response-services-for-people-with-mental-illnesses-or-intellectual-and-developmental-disabilities.pdf>
- Westervelt, E. (2020, September 18). *Mental health and police violence: How crisis intervention teams are failing*. NPR. <https://www.npr.org/2020/09/18/913229469/mental-health-and-police-violence-how-crisis-intervention-teams-are-failing>
- White, M. D., Goldkamp, J. S., & Campbell, S. P. (2006). Co-occurring mental illness and substance abuse in the criminal justice system: Some implications for local jurisdictions. *Prison Journal*, 86(3), 301–326. <https://doi.org/10.1177/0032885506290852>
- Yang, S.-M., Gill, C. E., Lu, Y.-F., Azam, M., & Kanewske, L. C. (2024). A police-clinician co-response team to people with mental illness in a suburban-rural community: A randomized controlled trial. *Journal of Experimental Criminology*. <https://doi.org/10.1007/s11292-023-09603-8>
- Zajac, G., Nur, S. A., Kreager, D. A., & Sterner, G. (2019). Estimated costs to the Pennsylvania criminal justice system resulting from the opioid crisis,” deaths, dollars, and diverted resources: Examining the heavy price of the opioid epidemic. *The American Journal of Managed Care*, 25(13), S250–S255. <https://www.ajmc.com/view/estimated-costs-pennsylvania-criminal-justice-system-from-the-opioid-crisis>