Journal of Rural and Community Development

Association Between Mental Healthcare Shortages and Impact On Essential Community Resources

Authors: Michaela Tourville & Manoj K. Shrestha

Citation:
Tourville, M., & Shrestha, M. K. (2025). Association between mental healthcare shortages and impact on essential community resources. *The Journal of Rural and Community Development*, *20*(2), 102–124.

Publisher:
Rural Development Institute, Brandon University.

Editor:
Dr. Doug Ramsey

ISSN: 1712-8277
www.jrcd.ca

Association Between Mental Healthcare Shortages And Impact on Essential Community Resources

Michaela Tourville
University of Idaho
Moscow, ID, United States
MTourville83@yahoo.com

Manoj K. Shrestha
University of Idaho
Moscow, ID, United States
mks@uidaho.edu

Abstract

This study examines the association between mental healthcare "shortages" and (1) mental health "holds" in hospitals and (2) emergency first responder services. An analysis of monthly time series data from 2018 through 2022 suggests that changes in the number of mental health shortage areas are positively associated with changes in both the number of mental health holds in hospitals and emergency medical service dispatches. Moreover, while there seems to be a "lagged" association between mental healthcare shortages and mental health holds, both contemporaneous and lagged association was observed between mental health shortages and emergency medical dispatches.

Keywords: Mental healthcare shortage, community resources, impact on hospitals, impact on first responders

Association entre les pénuries de soins de santé mentale et l'impact sur les ressources communautaires essentielles

Résumé

Cette étude examine l'association entre les « pénuries » de soins de santé mentale et (1) les « blocages » de la santé mentale dans les hôpitaux et (2) les services d'urgence de première intervention. Une analyse des données chronologiques mensuelles de 2018 à 2022 suggère que les changements dans le nombre de zones de pénurie de santé mentale sont positivement associés aux changements à la fois dans le nombre d'hospitalisations pour santé mentale et dans les répartitions des services médicaux d'urgence. De plus, bien qu'il semble y avoir une association « décalée » entre les pénuries de soins de santé mentale et les blocages en matière de santé mentale, une association à la fois contemporaine et décalée a été observée entre les pénuries de santé mentale et les envois médicaux d'urgence.

Mots clés : Pénurie de soins de santé mentale, ressources communautaires, impact sur les hôpitaux, impact sur les premiers intervenants

1.0 Introduction

In recent years, mental healthcare systems in many communities are struggling to keep up with the demands for mental healthcare services. This situation is exacerbated by the growing service needs for people with mental illness and mental healthcare provider shortages. In 2023, about one in five adults in the United States lived with mental illness, and nearly one-half of them lacked access to treatment (Health Resources & Services Administration [HRSA], 2024). According to the U.S. National Institute of Health (NIH), mental illness is a wide range of mental, behavioral, or emotional disorders resulting in impairments which substantially interfere with limits on one or more major life activities (https://www.nimh.nih.gov/health/statistics/mental-illness). These disorders include depression, anxiety, schizophrenia, bipolar disorder, eating disorder, or even suicidal thoughts. If left untreated, mental illness gets worse overtime and can cause serious physical harm to oneself and others.

Significant progress has been made in the past sixty years in the development of mental health treatments, prevention interventions, and recovery support, along with a major shift from a state-run coercive, hospital-based care (institutional care) to community-based care with outpatient, inpatient, emergency, and rehabilitation services (McGinty. 2023; Nordstrom et al., 2019). However, challenges persist with access to mental healthcare services. Multiple factors are driving this situation, including behavior health provider shortages, high out-of-pocket costs, coverage gaps, declining social stigma, and an increase in the prevalence of mental illness in the population (HRSA, 2024; Larkin et al., 2005; McGinty, 2023). Substantial shortages and maldistribution of the behavioral health workforce exit. In 2024, only 26,67% of the psychiatric workforce needs was met in the U.S., with an estimated 6,202 additional psychiatrists required to fill the gap (HRSA, 2025). In addition, psychologists, counselors, and peer support specialists are also in short supply (HRSA, 2024; McGinty, 2023). Rural areas are more likely than urban areas to lack such workforce, creating further challenges with access to behavioral health services in rural areas (HRSA, 2024). For example, in 2021, 69 % of rural counties were without psychiatric practitioners compared to 31% of urban counties (HRSA, 2024).

Mental healthcare shortages are commonly identified with mental healthcare professional shortage areas (HRSA, 2024). Mental healthcare shortage areas (MHSAs) are geographic areas, population groups, or health facilities that have a shortage of mental healthcare professionals. While a psychiatrist-to-population ratio of 1 to 30,000 (or one psychiatrist to 20,000 population for high-need communities) is considered a primary factor in determining a MHSA, other factors taken into account are the percentage of the population below 100% of the federal poverty level, travel time to the nearest source of care, unmet needs of the population, alcohol and substance abuse, elderly ratio, and youth ratio (HRSA, 2023).

Mental healthcare shortages can have severe short-term and long-term consequences on the mentally ill population, including not getting a proper diagnosis, self-medication, or turning to drugs or alcohol. For those who get diagnosed, mental healthcare shortages would mean limited or no availability of mental healthcare facilities to seek treatment or manage their disorder. In rural MHSAs, access to mental healthcare services is further limited because of long wait times and long-distance travel for care (Milette-Winfree et al., 2020). As a result, people facing mental health emergencies in MHSAs fall back on the

emergency first response system by calling 911 or the hospital emergency departments (EDs). Since most patients in this situation can't provide voluntary consent for treatment, they are often kept on involuntary holds, called mental health or psychiatric hold, until they are evaluated by a mental health professional. In comparison, individuals with mental illness in non-MHSAs have access to community mental healthcare and, therefore, are less likely to resort to the hospital ED or first responder services.

In this study, we examine what impacts changes in mental healthcare shortages have on hospital EDs and first responder systems. Anecdotal accounts indicate that mental healthcare shortages have contributed to increased mental health ED visits and 911 calls for emergency first responder services, which, in turn, have resulted in the overburdening of both systems with adverse impacts on the effectiveness and quality of care for people with mental illness. Understanding how the community hospital and first responder services are impacted by mental healthcare shortages can provide valuable insights into addressing the mental healthcare challenges triggered by these shortages. There is little research related to this subject and the existing research is sparse at best. We aim to fill the gap by studying the phenomenon in the case of Idaho in the United States by employing monthly time series data covering a period of 2018 through 2022. Our time series regression results indicate that mental healthcare shortages are positively associated with mental health holds in hospitals EDs and mental health-related emergency law enforcement and medical dispatches. Our research contributes to the literature on mental health shortages and community mental healthcare challenges at the state and community levels.

2.0 Mental Healthcare Shortages, Mental Health Holds, and Emergency First Response

Consider that an individual residing in an MHSA is in a severe mental health crisis at risk of danger to self or danger to others. Because the area lacks mental health care to go to, this individual is most likely to end up in the hospital EDs (Hedman et al., 2016). Those with no access to treatment may go without care or get arrested and kept in jail in the case of violent or disruptive behavior (Lamb, 1988). Those who make it to EDs, their ED stay until they are stabilized and evaluated by a mental health clinician to determine whether they need inpatient or outpatient psychiatric care is often involuntary. This involuntary hold, called emergency mental health or psychiatric hold, is considered an important intervention in reducing harm because it provides access to timely care for individuals with mental health emergencies. In the U.S., all states and the District of Columbia have emergency hold laws. The laws allow police, mental healthcare professionals, or concerned citizens to place individuals with mental a health crisis in emergency care for stabilization, observation, or treatment without consent, especially when they are a danger to themselves or to others or gravely disabled (Hedman et at., 2016).

Hospital EDs have been experiencing disproportionate growth in psychiatric ED visits (Roennfeldt et al., 2021). While the number of all-cause ED visits in the U.S. has continued to increase, the number of psychiatric visits has grown by 6 to 10% annually (cited in Nordstrom et al., 2019, p. 74). Multiple conditions are considered to be responsible for this trend. Studies highlight the shortage of mental health care professionals and facilities as one of the primary conditions (Larkin et

al., 2005; Misek et al., 2015; Scheid & Smith, 2021). Other factors include an increase in the prevalence of mental illness in the population, a growing number of people with mental illness seeking care, and the lack of alternative mental health crisis services such as urgent care, professional on-call, or mobile crisis care to go to (Balfour et al., 2023; Nordstrom et al., 2019).

There is evidence suggesting that access to community mental health crisis care reduces ED referrals. Bonynge et al. (2005) studied a community mental health crisis center (CMHC) in a rural setting and found that the presence of a CMHC equipped with crisis care reduced inpatient utilization by 11% and inpatient referral by over 40%. This CMHC, structured as a comprehensive federal model, could be regarded as an ideal community mental health crisis center. It consists of urgent care (urgency to be seen within 72 hours), 24/7 crisis hotline, 24/7 professional on-call, crisis beds (with ED and urgent medical care referral available for medical issues), and mobile crisis components working in concert with a focus on reduced need for hospitalization, reduction of suicide potential, and integration with other mental health or social service entities (Bonynge et al., 2005). Hospital EDs, on the other hand, are not designed for integrated mental health care and, therefore, their care is limited to stabilization, evaluation, and referral to psychiatric care facilities.

An increase in ED visits and wait time for treatment leads to ED overcrowding, which, in turn, results in delays in treatment, reduced efficiency of ED staff, and an overburdened ED system. Because EDs are not primarily designed to care for psychiatric patients, they lack or have too few psychiatric clinicians and beds or trained ED staff, leading to treatment delays (Nordstrom et al., 2019). Delays in admission or transfer of the mentally ill patients are also common because of difficulty in placing these patients, private providers' hesitancy in accepting them who are mostly un/underinsured patients, and time-taking pre-authorization and other managed care hurdles (Nordstrom et al., 2019). Psychiatric visits occupy 42% more time than non-psychiatric visits, along with increased inpatient admission (24% versus 12%) and transfer (16% versus 1%), and the odds of length of ED stay for psychiatric patients are 4.78 times higher than non-psychiatric patients (Nordstrom et al., 2019). These long holds for psychiatric patients often accompany poor treatment and worsening symptoms for these patients. An increase in psychiatric ED visits also results in disruptions in the ED's treatment norms and flows and rising rates of psychiatric patients waiting in the ED hallways for admission or transfer (Roennfeldt et al., 2021). This situation turns EDs into psychiatric boarding and takes resources away from patients with medical emergencies for which EDs are typically planned (Nordstrom, et al. 2019; Roennfeldt et al., 2021). In addition, stretched ED staff with limited training in determining treatment plans for psychiatric patients are under constant stress and run the risk of adverse outcomes. Moreover, ED overcrowding overburdens the ED system with costs and reduced efficiency. Beyond direct costs, which are estimated at 2,264 dollars to board a psychiatric patient, ED overcrowding leads to reduced ED capacity, longer wait time for all patients, increased patient frustration, stressed ED staff, overuse of ED, and lost hospital revenue (Nordstrom et al., 2019).

Another frequently used, and probably the fastest way to get help in a mental health crisis is to call 911 for emergency first responder services. The 911 system is designed to quickly triage calls so that first responders like police, firefighters, or

paramedics can be dispatched to the caller's location as soon as possible without attempting to provide counselling and crisis resolution over the phone (Balfour et al., 2023). Although 911 is a crucial component of behavioral health crisis response system, an ideal mental health crisis response system would have several components functioning together, constituting a dedicated hotline for reporting a mental health crisis, trained dispatchers for activating the crisis response, mobile mental health professionals responding to the crisis, a law enforcement support where needed to be backed by seamless drop-off locations where persons in crisis are evaluated by competent professionals and connected with services in the community (Curry et al., 2023). This is not the reality.

Emergency first responder services have increasingly become the primary response to mental health crises. Too often, 911 call-takers, especially in rural areas with limited or no behavioral health crisis training, dispatch police to calls because of safety concerns involved in most mental health emergencies combined with a lack of timely, robust crisis care alternatives (Gillooly, 2020). 911 call-takers also dispatch first responder emergency medical service (EMS) to mental health crisis calls. This is more so in communities where 911 call centers are equipped with trained staff and resources. Estimates vary for the portion of mental health emergency 911 calls. Curry et al. (2023), in their analysis of 911 calls in eight cities, found that 21 to 38% of those calls were for mental health, substance abuse, or other quality-of-life concerns.

Responding to mental health-related emergencies places significant demand on already overburdened first responders and their resources (The Pew Charitable Trusts, 2022). Police response to mental health crises can be risky, especially when officers arriving on the scene lack training on how to handle mental health crises. They can inadvertently escalate the situation instead of stabilizing it. Seeing police in uniform, the individual in a mental health crisis may display increased disruptive or violent behavior, which can end up in arrest, jail time, or fatal encounters. Studies show that 20% of people in jails and 15% in prisons have severe mental illness (The Pew Charitable Trusts, 2022). Likewise, one-quarter to half of all fatal police encounters are mental health-related, and persons with mental illness are 16 times more likely than those without it to be killed when encountering law enforcement (Curry et al., 2023).

EMS response to mental health-related calls occurs when 911 call-takers determine that the case requires emergency medical assistance. EMS, staffed with paramedics and emergency medical technicians, often assists the police in response to mental health-related calls when the calls turn out to be medical emergencies, including a suicide, suicide attempt, or drug overdose. Attending behavioral calls has become a substantial part of the workload of EMS, accounting for almost 8% of all EMS calls (UnitekEMT, 2021; Klaus, 2021; McCann et al., 2018). The burden becomes even greater when EMS professionals are not aware of the severity of the situation when a call comes in. Nearly half of all behavioral health calls dispatched by EMS identify the severity of the situation after they arrive and assess the situation (Rivard et al., 2022). EMS response to mental health-related calls can also result in adverse outcomes. Responding to mental health-related calls increases call times for both law enforcement and EMS professionals. These calls can distract first responders from responding to other emergencies, putting communities at risk. Because EMS is not designed for mental health emergencies, the emergency intervention by paramedics can go wrong,

making the patient's condition worse. Moreover, EMS professionals are at an increased risk for injury, especially when the professionals lack specialized training on behavioral mental health challenges. According to the National Institute for Occupational Safety and Health[1], EMS professionals experience injuries at a rate 22 times higher than the national average for all workers with an estimated 3,000 injuries reported in 2020 (see O'Meara et al., 2019).

Studies show that the diversion of mental health-related 911 calls to mental health crisis facilities can reduce the unintended effects of misplaced police or EMS dispatches. Crisis facilities can serve as a safe and therapeutic alternative to hospital EDs, inpatient psychiatric units, or jails (Balfour et al., 2023). For example, a comparison of pre-and-post outcomes of utilizing a crisis intervention team (CIT) showed an increase in the transport of individuals with mental illness to mental health facilities (Balfour et al., 2023, p. 20). Routing calls away from the police response can reduce the use of force, involuntary treatment, and unnecessary arrests that put many mentally ill people in the criminal justice system.

3.0 The Case of Idaho

The State of Idaho (hereafter, Idaho) began managing behavioral healthcare needs in the late 1960s in response to the Community Mental Health Act of 1963. By the early 1970s, Idaho had a strong behavioral health plan, but it started faltering when federal funding began to run out. Soon, Idaho became dependent on Medicaid funding for mental healthcare services to meet the growing cost of community mental health centers (Castro & Burns, 2006; Moroney, 2015). In 2013, Idaho executed a series of behavioral healthcare reforms in response to the Jeff D. lawsuit filed in 1980 against the governor of Idaho, the Idaho Department of Health and Welfare, the Idaho Department of Juvenile Corrections, and the State Department of Education for failing to meet the mental healthcare needs of Idaho's youth. Those reforms included the implementation of the Idaho Behavioral Health Plan, which began an expansion of behavioral health services for children by adopting managed care delivery systems to control utilization, cost, and quality of services. The adult mental health and substance abuse programs were integrated under the Division of Behavioral Health. In addition, Idaho Behavioral Health Planning Council was created to integrate mental health and substance abuse issues and to provide advocacy support for adults and children with behavioral health concerns.[2]

The assessment of Idaho's state of behavioral healthcare services conducted in 2015 outlined several weaknesses, including adverse impacts on essential community services, overreliance on psychiatric rehabilitation, and lack of improvement in the continuum of care (Idaho Office of Performance Evaluation, 2016). The Idaho Behavioral Health Planning Council's 2017 Governor's Report also echoed similar concerns with the addition of a fragmented system of care, and lack of education and public awareness. In response, in 2021, the Idaho Behavioral Health Planning Council created a strategic action plan with a new behavioral health initiative which included creating crisis centers throughout the state, adding a state hospital for children, and providing improved access to services for the behavioral health population.

[1] https://www.cdc.gov/niosh/topics/ems/default.html

[2] For the existence of these reform, see Idaho Department of Health & Welfare, https://healthandwelfare.idaho.gov/

Idaho ranks the highest population with mental health issues in the U.S., with 33% of Idaho adults reporting symptoms of anxiety and depressive disorder compared to a national average of 31.6%. A study of all 50 states plus the District of Columbia conducted by Mental Health America[3] ranked Idaho 50th in having the highest percentage of people with mental illness and the second lowest rate of access to care in all states (Reinert et al., 2021). While Idaho lacks long-term data on mental health services, the available data points to an increase in the number of designated mental healthcare shortage areas, which grew from 62 in 2018 to 71 in 2022, with a negligible drop in 2020. According to HRSA[4], about 78% of MHSAs in Idaho are in rural areas. In 2024, nearly 60.5% of Idaho's population lived in the designated MHSAs (HRSA, 2025).

There is a lack of systematic research on the impact of mental healthcare shortages on essential community resources, such as hospitals and emergency first responders in Idaho. Anecdotal evidence suggests that the shortage of mental healthcare services has created strains on these community resources. For example, Disability Rights Idaho (2015) stated, "Although there are no statewide data, many local hospitals and law enforcement agencies report increased utilization of county programs, law enforcement, jails, and hospital emergency departments in handling mental health crises." Likewise, Idaho State Behavioral Health Planning Council (2021) observed that behavioral health-related 911 calls are stretching law enforcement and emergency responders beyond their capacity and scope due to a lack of access to crisis support and effective behavioral healthcare. As regards to advice on behavioral health crisis resources to the public, Idaho Department of Health and Welfare (IDHW) on its website declares, "If you feel you cannot keep yourself safe, go to the nearest emergency departments or call 911" (https://healthandwelfare.idaho.gov/services-programs/behavioral-health/behavioral-health-crisis-resources). Given the context, we assume that hospital EDs and emergency first responders are likely to be impacted by the shortage of mental healthcare services. Increased stress on hospitals and first responders is the direct or first-order impact of mental healthcare shortages, whereas the loss or poor quality of services experienced by the general population is an indirect impact of mental healthcare shortages. This research focuses on studying the direct impact of mental healthcare shortages on hospitals and emergency first responders. We summarize our hypothesis as follows:

Hypothesis: Hospitals and emergency first responders will experience increased impacts with an increase in mental healthcare shortages.

4.0 Methods

4.1 Data and Measures

The number of mental healthcare professional shortage areas is utilized to measure mental healthcare shortages—the higher the number of MHSAs, the greater the mental healthcare shortages and vice versa. MHSAs are one commonly used method to measure the extent of mental healthcare provider shortages (HRSA, 2024). As noted earlier, MHSAs are geographic areas, population groups, or health facilities

[3] See the website (retrieved December 12, 2023): Access to Care Ranking 2022, https://mhanational.org/issues/2022/mental-health-america-access-care-data
[4] From https://data.hrsa.gov/topics/health-workforce/shortage-areas

that have a shortage of mental healthcare professionals. Data for MHSAs was gathered for the period 2018 through 2022 from reports published by the HRSA.

For impacts on hospital EDs, the number of mental health holds was used for the period 2018 through 2022, for which data were available. Previous studies have used mental health holds to assess the impact of mental healthcare shortages on hospitals (Brennaman, 2015; Santillanes et al., 2017; Zeller et al., 2014;). Data for mental health holds was collected from the Mental Health Dashboard Report published by the Idaho Department of Health and Welfare on its website and through a public records request to the Idaho Division of Behavioral Health, which keeps track of the number of mental health holds that occur in hospitals statewide.

As previously mentioned, a mental health hold is an involuntary placement of an individual with a mental health crisis in a hospital by an entity with the authority to do so. In Idaho, as dictated by the Idaho statute, involuntary holds can be initiated by a police officer, a physician, a physician assistant, or an advanced practicing registered nurse when they have reasons to believe that the individual is gravely disabled due to mental illness or is an imminent threat to himself or others (Smith & Strobel, 2020; Idaho Legislature, n.d.). When a police officer initiates an involuntary hold, the patient is taken into custody and placed in a hospital ED or mental health facility. A physician, physician assistant, or registered nurse initiates an involuntary hold when the patient is already at the hospital, and the need for a hold is identified. These holds can last 24 or 72 hours before they are released or referred to a psychiatric facility, depending on the psychiatric evaluation of the patient.

The number of mental health-related 911 calls involving emergency law enforcement dispatches and emergency medical dispatches were used to capture the impact on emergency first response. Individuals with mental health crises turn to first responders for immediate help when there is a lack of access to emergency mental healthcare services. Because of the lack of a statewide systematic depository of these records, data gathered for these measures were limited to Ada County of Idaho for the period 2018 through 2022. This involved a public records request to the Ada County Sheriff's Department. Ada County was chosen because the records maintained by the Ada County Sheriff's Department were the most detailed longitudinal data. Moreover, Ada County is the most populated county in Idaho, representing nearly 27% of Idaho's population.

4.2 Data Analysis

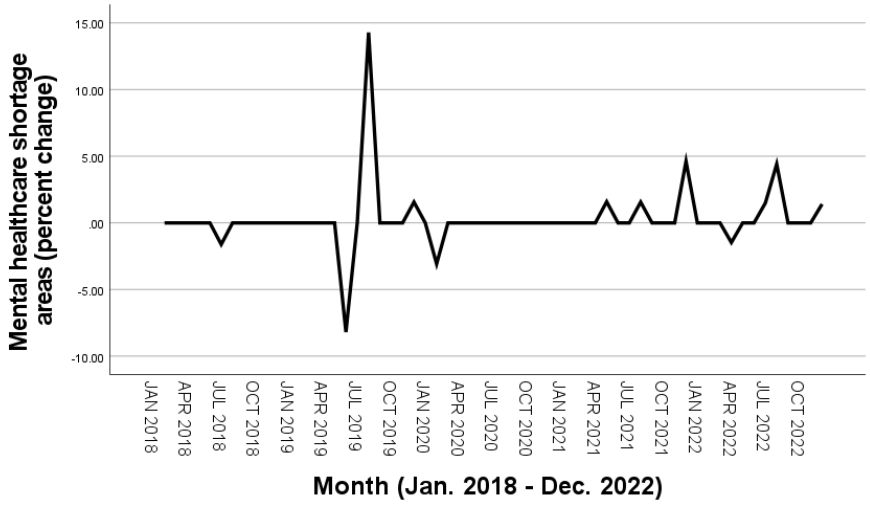
We have gathered data for the above variables of interest for which data were available. These variables are the number of MHSA, number of mental health holds (MHH), number of emergency medical dispatches (EMD), and number of law enforcement dispatches (LED). All variables are at a monthly frequency. The data for all variables starts in January 2018 and ends in December 2022. To obtain a monthly number for MHSAs, first, the "HRSA Find" tool, found on the HRSA website, was used to identify the dates when MHSAs were designated, withdrawn, updated, or re-designated (https://data.hrsa.gov/tools/shortage-area/hpsa-find). Then, this information was used to arrive at the monthly number of MHSAs that were in active designation for the period covering 2018 through 2022. Monthly data for the other three variables for the same period was compiled from monthly records obtained through public record requests, as noted earlier.

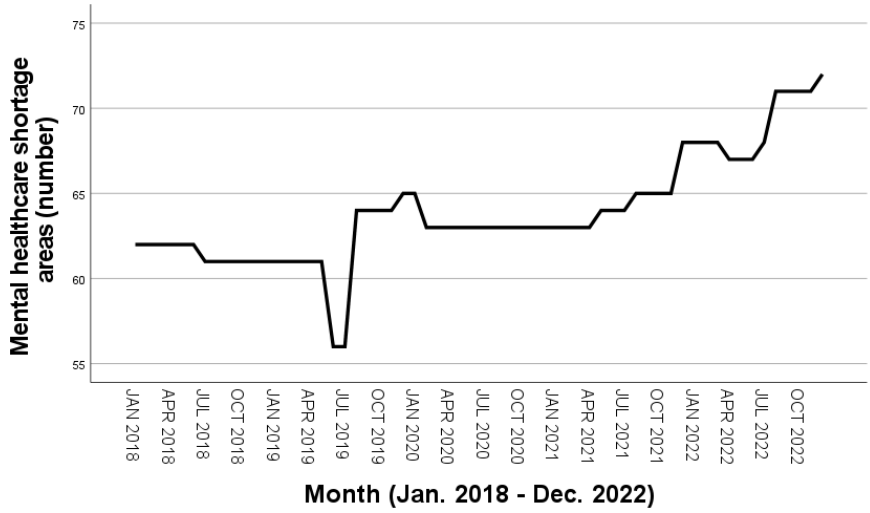
An exploratory data analysis was performed by creating sequence plots of these time series variables in original metric (numbers), as shown in the left panel of Figure 1. There are ups and downs in each series, more so with mental health holds, law enforcement dispatches, and emergency medical dispatches. The overall trend is positive in mental health holds and law enforcement dispatches. The trend in mental health hold series is positive for the most part. The trend in the emergency medical dispatch series is positive only for the second part. Also, the trend is closer to exponential in MHSA, mental health hold, and emergency medical dispatch series. The trend is linear only in the law enforcement dispatch series. Because of the exponential trend in the monthly series (except for law enforcement dispatches), the original series in numbers were replaced with percentage changes (Békés & Kézdi, 2021, p. 344-345). Békés and Kézdi (2021) suggest the following:

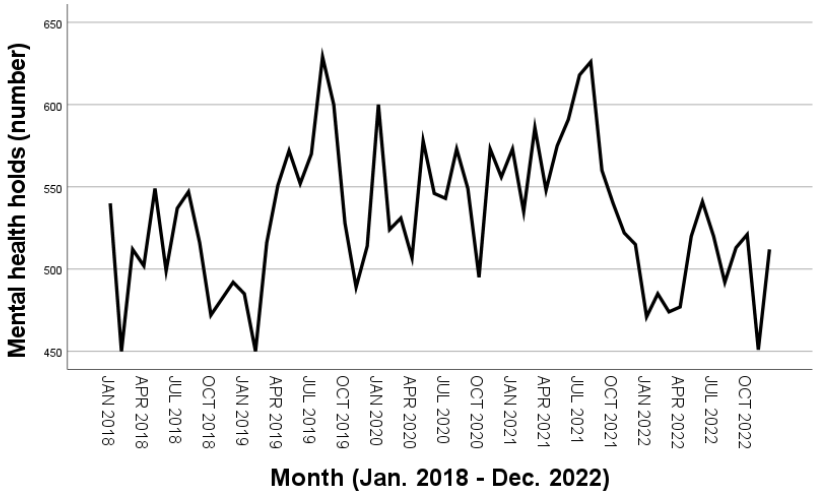
> It is good practice to have variables as changes (relative changes, percentage changes, log changes) in time series when we want to estimate average association or effects (levels may be fine for prediction). Analyzing changes saves us from spurious regressions because of trends, and it saves us from biased standard error estimates because of random walks. Moreover, time series regression in changes produce interpretable results. That is true even if the variables have no trend or random walk (p. 345).

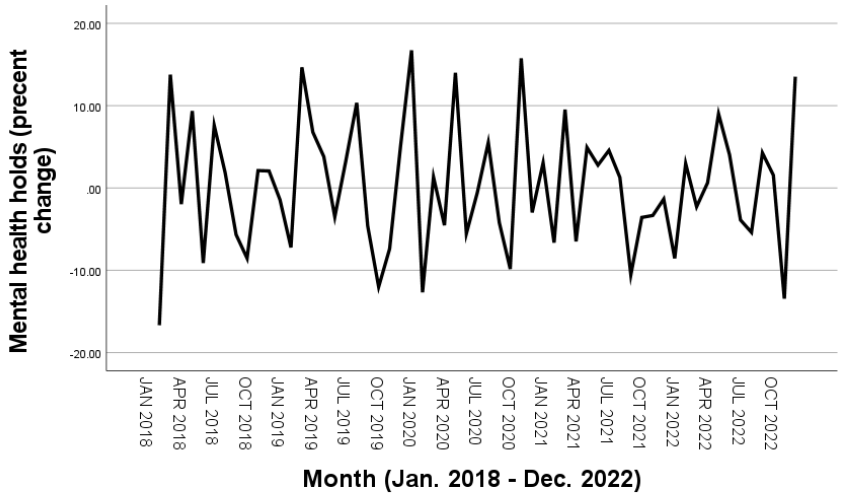
The percentage changes of the original values were computed by diving the first difference of each of the series (difference between time t and time t-1) by the first preceding time (t-1) of the respective series and then multiplying the product by 100 % ($(Y_t) = (Y_t - Y_{t-1}/Y_{t-1})$ 100%). The sequence plots of the variables with percentage change are displayed in the right panel of Figure 1. The corresponding sequence plots in percentage changes show no trend as these monthly percentage changes appear to fluctuate around zero or a small positive number. The overall fluctuations appear to be larger in mental health hold, law enforcement dispatch, and emergency medical dispatch variables than in MHSAs.

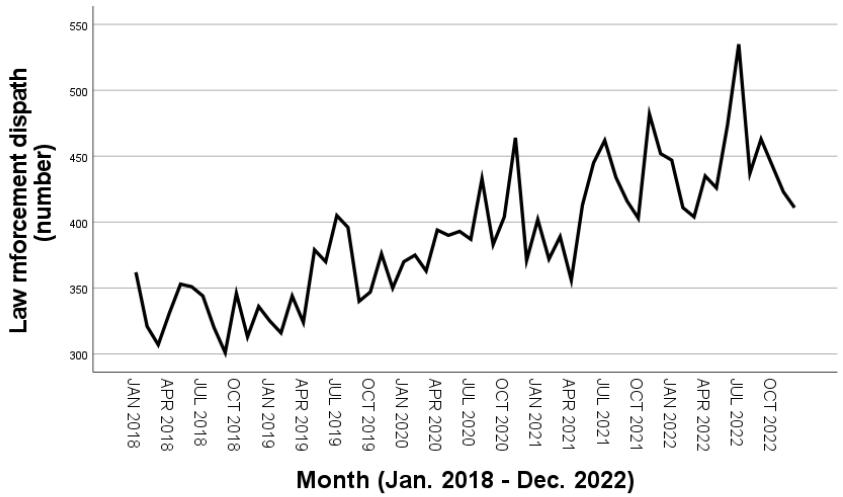
Figure 1: Monthly series of MHSAs, mental health holds, law enforcement dispatch, and emergency medical dispatch, January 2018 - December 2022.

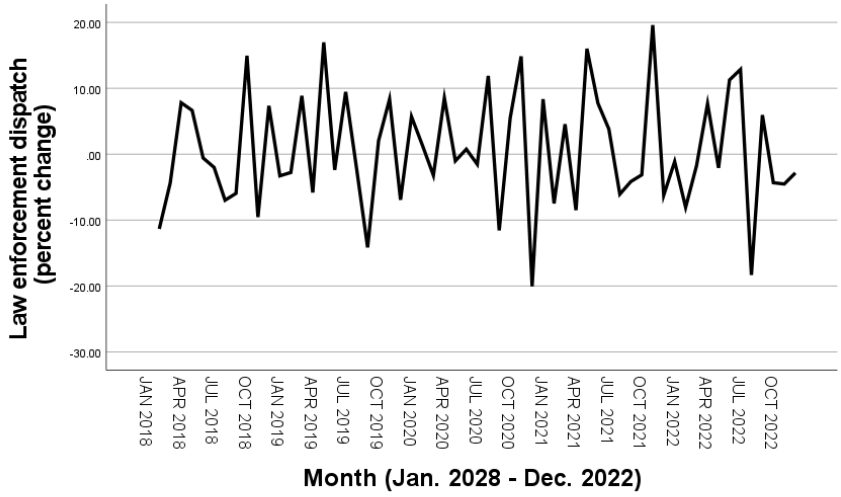


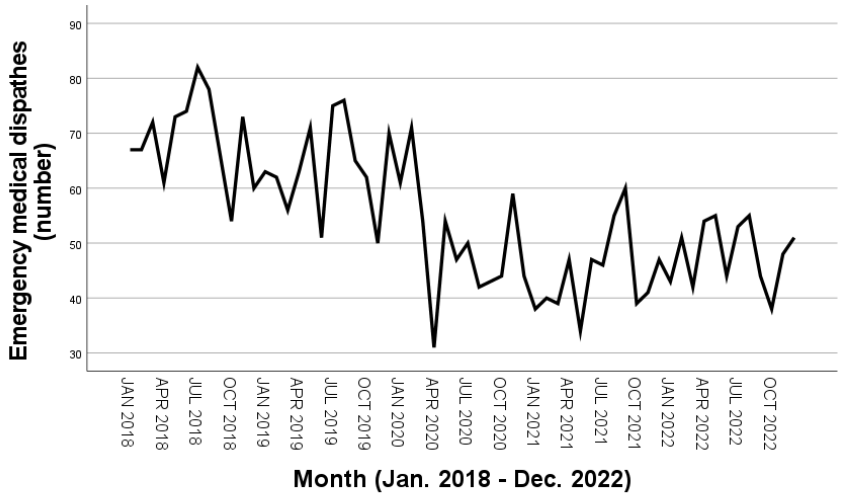



Mental health holds (number)
650
600
550
500
450
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2018 - Dec. 2022)


Mental health holds (precent change)
20.00
10.00
.00
-10.00
-20.00
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2018 - Dec. 2022)


Law rnforcement dispath (number)
550
500
450
400
350
300
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2018 - Dec. 2022)


Law enforcement dispatch (percent change)
20.00
10.00
.00
-10.00
-20.00
-30.00
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2028 - Dec. 2022)


Emergency medical dispathes (number)
90
80
70
60
50
40
30
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2018 - Dec. 2022)

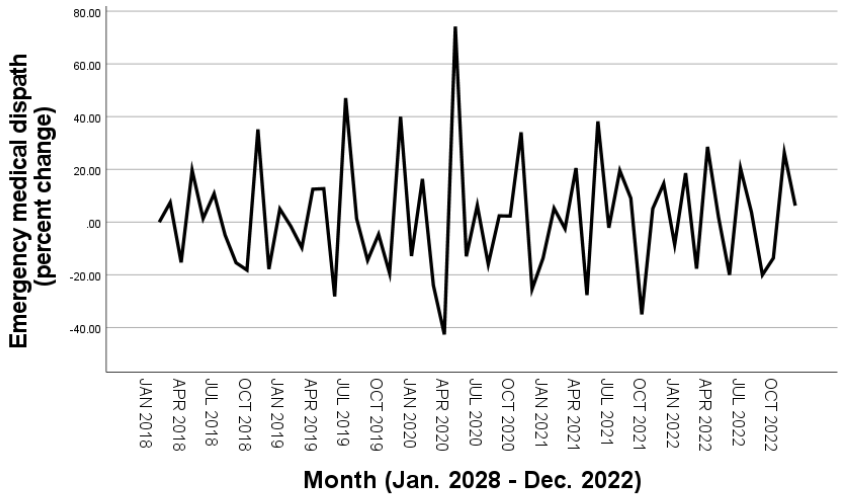

Emergency medical dispath (percent change)
80.00
60.00
40.00
20.00
.00
-20.00
-40.00
JAN 2018
APR 2018
JUL 2018
OCT 2018
JAN 2019
APR 2019
JUL 2019
OCT 2019
JAN 2020
APR 2020
JUL 2020
OCT 2020
JAN 2021
APR 2021
JUL 2021
OCT 2021
JAN 2022
APR 2022
JUL 2022
OCT 2022
Month (Jan. 2028 - Dec. 2022)

Table 1 summarizes the descriptive statistics for the variables in monthly percentage changes. Monthly percentage changes were positive on average for all the variables, suggesting that the month-to-month percentage change in the variables followed a positive trend. When comparing the average monthly percentage changes and their variability, the average monthly percentage changes in the LED and EMD variables were higher than the average monthly percentage changes in the MHSA variable. The LED and EMD variables also varied widely than that of the MHSA variable. The average monthly percentage change in the MHH variable was lower than the average monthly percentage change in the MHSA series, but it fluctuated more widely. The monthly percentage change in MHSAs, on average, was slightly over a quarter percentage change (.28) with a standard deviation of 2.39. In comparison, the average monthly percentage changes in the MHH, LED, and EMD series were .21, .59, and 1.74, with a standard deviation of 7.88, 8.76, and 21.78, respectively.

Table 1: *Descriptive Statistics in Monthly Percentage Changes*

Variables	Minimum	Maximum	Mean	Std. Deviation
Mental healthcare shortage areas	-8.20	14.29	.28	2.39
Mental health holds	-16.67	16.73	.21	7.88
Law enforcement dispatch	-20.04	19.60	.59	8.76
Emergency medical dispatch	-42.59	74.19	1.74	21.78

Note: Number of observations = 59. Monthly series from January 2018 through December 2022.

5.0 Results

We estimated three separate time series regressions with monthly percentage changes in the number of MHSAs as the independent variable and monthly percentage change in the number of MHHs, LED, and EMD as the dependent variables to determine their association. Since time series observations are subject to serial correlation, we included lagged dependent variable in each time series regression to correct for autocorrelation (Békés & Kézdi, 2021). Likewise, because high and low swings in monthly percentage changes in the dependent variables are likely to be correlated with seasonal variations (see Figure 1), monthly dummies were included in the regression models to account for the potential seasonal effect in which the month of January served as a reference month (Békés & Kézdi, 2021). Moreover, changes in policies normally take time to take effect. The process of determining, designating, or reinstituting MHSAs is very involved. In addition, the subsequent withdrawal or restoration of mental health service as well as adaption to those changes for managing care on the part of individual with mental illness and their loved ones take time. Therefore, lags of the monthly percentage change in the number of MSHAs were included to capture possible lagged effect on percentage changes in the number of mental health holds, law enforcement dispatches, and emergency medical dispatches.

Table 2 reports the regression results for the impact of monthly percentage change in the number of MSHAs on the monthly percentage change in the number of mental health holds, law enforcement dispatch, and emergency medical dispatch.

The estimated models are statistically significant at less than 5 % significance level. The values of the Durbin-Watson (DW) autocorrelation test statistic obtained for these models range from 2.19 to 2.36. Because these DW values are close to 2, they indicate either lack of autocorrelation or inconclusive determination (Békés & Kézdi, 2021). The estimated models account for 27 to 35 percent of variations in the response variables, as indicated by the adjusted R-square values. We have also performed a robustness check by estimating the time series regressions, replacing the values of the series in percentage change by their respective first differences of the original series in numbers (i.e., in simple month-to-month change).[5] The results obtained were similar; that is, measuring the variables in percentage changes or first difference made little difference to the results suggesting that the results with percentage changes are robust).

Table 2: *Effect of MHSAs on Hospital EDs and Emergency First Response (in percentage changes)*

Variables	**Impact on mental health holds**	**Impact on law enforcement dispatch**	**Impact on emergency medical dispatch**
Lagged DV	-30	-.57***	-.37**
	(.17)	(14)	(.16)
MHSAs	.41	.17	3.26**
	(.49)	(.57)	(1.40)
MHSAs lag 1	-.17	-.39	-2.09
	(.48)	(.56)	(1.45)
MHSAs lag 2	.07	-.36	3.52**
	(.54)	(.63)	(1.56)
MHSAs lag 3	-.53 (	-.31	-2.89
	.51)	(.60)	(1.63)
MHSAs lag 4	.19	.56	-3.10
	(.54)	(.62)	(1.67)
MHSAs lag 5	1.08**	-.21	.94
	(.48)	(.55)	(1.51)
MHSAs lag 6	-.08	.49	.64
	(.49)	(.56)	(1.37)
Month=2, Feb.	-3.22	-4.46	8.11
	(5.61)	(6.80)	(16.35)

[5] In so doing, it was assumed that the trend in the monthly time series is linear in which case it is advisable to use first difference (simple change) to take care of the trend (Békés & Kézdi, 2021, p. 344). First difference is the difference between the current period value and the previous period value; that is, $\Delta(Y_t) = (Y_t) - (Y_{t-1})$.

Table 2 continued			
Month=3, Mar.	6.11 (5.00)	-.46 (5.85)	-.30 (14.76)
Month=4, Apr.	2.16 (5.28)	.27 (6.13)	5.55 (14.67)
Month=5, May	6.75 (4.90)	7.27 (5.85)	17.98 (14.48)
Month=6, June	4.46 (5.24)	8.33 (6.40)	16.86 (15.45)
Month=7, July	2.17 (5.61)	7.31 (6.78)	15.26 (16.52)
Month=8, Aug.	3.42 (5.16)	-2.82 (6.16)	8.33 (15.20)
Month=9, Sept.	-1.83 (4.95)	-7.97 (5.80)	2.42 (14.42)
Month=10, Oct.	-6.70 (5.15)	1.86 (6.06)	-19.36 (14.96)
Month=11, Nov	2.13 (5.07)	7.91 (6.13)	30.95** (14.41)
Month=12, Dec.	2.76 (5.48)	-4.52 (6.60)	-.16 (17.55)
Constant	-1.39 (3.84)	.34 (4.66)	-6.69 (11.49)
Adjusted R-Squared	.27	.30	.35
Durbin-Watson	2.19	2.36	2.19
Observations	53	53	53

Note: Variables are in monthly percentage changes. Monthly dummies included but not shown. Standard error estimates in parentheses. ** p < .05, *** p <.01. Monthly observations from January 2018 through December 2022.

The regression estimates show a statistically significant and positive association between the current period's monthly percentage change in MHSAs and monthly percentage changes in emergency medical dispatch. The estimates for the current period monthly percentage change in MSHAs are not statistically significant in relation to the current period monthly percentage changes in mental health holds and law enforcement dispatch, even though the coefficients for the estimates are

positive. However, a five-month lagged association was observed between monthly percentage changes in MHSAs and monthly percentage changes in mental health holds as indicated by the statistically significant and positive coefficient for the five-month lag period of the MHSA variable. A two-month lagged association was detected between monthly percentage change in MSHAs and monthly percentage change in emergency medical dispatch, as shown by the statistically significant and positive coefficient for the two-month lag period of the MHSA variable. No lagged association was found between monthly percentage change in MSHAs and monthly percentage change in law enforcement dispatch. Monthly seasonal effects were not found to be large enough for monthly changes in mental health holds and law enforcement dispatch. Monthly seasonal effects were found to be statistically significant and positive for changes in emergency medical dispatch for the month of November, suggesting that the percentage change in emergency medical dispatch was higher in November than in January.

6.0 Discussion

Our results did not find a contemporaneous effect of percentage changes in the number of MHSAs on percentage changes in the number of mental health holds. However, the results indicate a lagged association between the two. The result for the lagged effect suggests that a monthly increase of 1% in MHSAs is likely to be associated with a 1.08% monthly increase in mental health holds five months after the increase in MHSAs controlling for the lag of the mental health hold variable itself, lag periods of percentage changes in MHSAs, and monthly dummies included in the model. Considering a monthly average of 64 MHSAs and 532 mental health holds existed during the study period, this lagged association would mean that a month-to-month increase of one MHSA is likely to lead to a month-to-month increase of about nine mental health holds five months after an increase of one MHSA has occurred.

It is worth noting that the number of mental health holds shrunk toward the latter part of the period under study after reaching the peak in August 2021 (see Figure 1). The prevalence of COVID-19 and the provision of additional emergency behavioral crisis care centers around the time in the state could provide a possible explanation. Because of the largest number of COVID-19 cases at the time, hospital EDs were full of COVID-19 patients, with a sharp decline in the intake of emergency psychiatric patients. At the same time, Idaho added at least two behavioral crisis care centers to provide urgent help with mental health emergencies and to reduce their overflow in hospital EDs. Additionally, in 2022, Idaho implemented the 988-crisis helpline for people with mental health crises to talk with a trained professional, which may have averted some of them ending up in hospital EDs. For example, in Ada County of Idaho, a special team of paramedics called the Psychiatric Emergency Team (PET) responds to mental health emergency calls (Rea, 2016). Upon arrival, this team evaluates the situation to determine if the affected individual requires mental health treatment or if the crisis could be resolved onsite. If treatment is needed, the team then attempts to place the individual at a mental health provider or an emergency crisis center instead of taking the patient to a hospital emergency (Makin et al., 2023). This mechanism helps reduce mental health holds in hospital EDs, but it does not eliminate the need because the placement options outside of the hospital EDs are not always available.

The findings support that an increase in MHSAs is associated with increased utilization of first responder emergency medical services. The results indicate both contemporaneous and lagged effects of percentage changes in the number of MHSAs on percentage changes in the numbers of emergency medical dispatches. With a monthly increase of MHSAs by an additional 1%, a contemporaneous monthly increase in the number of emergency medical dispatches was 3.26%, and a two-month lagged monthly surge in the number of emergency medical dispatches was 3.52%. In view of 64 MHSAs and 55 emergency medical dispatches on average per month, a month-to-month increase of one MHSA is likely to result in a month-to-month increase of about three emergency medical dispatches within the same period and about the same number of emergency medical dispatches two-months after. Cumulatively, the effect of an increase in MSHAs on emergency medical dispatch service is likely to be much larger. The finding that changes in MHSAs influence changes in first responder emergency services resonates with similar tendencies experienced by many communities, prompting them to equip first responders with specialized training to be able to manage these new challenges better. For example, the governor of the State of New York recently signed a new law to ensure first responders receive specialized training on handling mental health and addiction-related crisis intervention and mental health first aid[6]. Disability Rights Idaho (2015), in its testimony to the Idaho Advisory Committee of the U.S. Commission on Civil Rights, attested that mental health crisis calls are stretching law enforcement and emergency responders to the breaking point. Many of these mental health patients landing in hospitals are brought in by ambulance when a mental health emergency call turns out to be an injury call of greater severity involving harm to self or the harm of others.

The lagged effect observed of MHSAs on mental health holds and emergency medical dispatches is plausible. Disruptions in mental healthcare services because of the MHSA designation and the time involved in adapting to the change for many individuals with mental illness can offer a partial explanation for the delayed effect. By the time an area or a facility is designated as a MHSA, the application for that designation has already been submitted up to 90 days prior (HRSA, 2020). During this waiting period, mental healthcare providers are most likely to continue to provide care to mentally ill individuals. However, once withdrawal starts with the actual designation, the mental health population begins to experience reduced visits with mental health providers, and the providers leaving the area worsen the situation (Merelli, 2023; Paradis, 2022). A decline in mental health providers results in patients waiting for weeks or months for their next appointment or to arrange new services (Papajohn, 2023). Many mentally ill people and their loved ones struggle to adapt to the changes, including figuring out the alternatives to go to for help in emergencies. The decline in access to mental health care continues to decrease in the months after the MHSA designation, leading to eventual mental health emergencies. When these crises occur, the affected individuals rely on 911 calls for emergency assistance. This is when first responders begin to see a rise in mental health calls, subsequently leading to an increase in mental health holds in hospitals. What is puzzling is the length of time observed for the delayed effect of changes in

[6] Governor Hochul Signs Legislation to Provide Addiction and Mental Health Services Training for First Responders. Retrieved June 19, 2023, from https://www.governor.ny.gov/news/governor-hochul-signs-legislation-provide-addiction-and-mental-health-services-training-first

MHSAs on changes in mental health holds (five-month lag) and changes in emergency medical dispatches (two-month lag).

7.0 Conclusion

Overall, our study indicates that an increase in mental healthcare shortages has real consequences. When access to mental healthcare providers shrinks, individuals facing mental health crises resort to hospital emergency rooms and emergency first responder services for help. This creates strains on hospitals and emergency first responders. While only lagged effects of MHSAs were detected for mental health holds, both contemporaneous and lagged effects of MHSAs were observed for emergency medical dispatches. Furthermore, the time lag for the lagged effects appears to be shorter for emergency medical dispatches than for mental health holds. The finding that there is an association between changes in mental healthcare shortages and changes in these essential community resources is significant for the literature, given that little is known about the mechanism, scope, and extent of the impacts. The findings are also important for policy. The observation that mental health holds in hospital EDs and emergency medical dispatches are subject to the contemporaneous and lagged effects of mental healthcare shortages differently should be of great value to policymakers and mental healthcare providers to design appropriate policy responses to minimize the impacts.

There are limitations to this study. First, the study was restricted to the direct impacts of mental healthcare shortages on hospitals and emergency first responders. The full scope and scale of both direct and indirect impacts of mental healthcare shortages, such as delays or loss of services to the public, for example, will presumably be much larger. Similarly, our study was limited to a five-year period from 2018 to 2022 due to limits on data availability. Most of the recorded data only went back to 2018 and was limited to hospitals impacted by the shortage of mental healthcare services. The lack of data specifically for rural areas pertaining to mental health emergency calls is especially notable. Considering that Idaho is mostly rural, the impact of mental healthcare shortages on emergency first responder services is likely to be more prominent in those areas. Furthermore, because this study was specific to Idaho, it has limits to generalization.

Future research should expand the scope of the study and examine the impacts of mental healthcare shortages more broadly on all essential community resources, including employment, rehabilitation, and housing services. This will provide a better understanding of the full range of impacts of mental healthcare shortages valuable for informed policy interventions. In addition, systematic tracking and recording of longitudinal mental health-related data itself should be of great value for improved analysis and evidence. For example, more refined data covering a longer period of time can help uncover and solve the observed puzzle underlying the lagged effects of MHSAs on hospitals and first responder services. Moreover, considering that changes in MHSAs affect hospitals and first responder services differently, it would be worthwhile examining the personal circumstances of the individuals and families with mental health crises that encourage them to respond differently as they seek help. Finally, future studies should examine the distributional impacts of mental healthcare shortages to help address inequity in the mental health service delivery, as the impacts are likely to be felt inequitably by different social and economic groups or across urban-rural divides.

References

Balfour, M. E., & Zeller, S. L. (2023). Community-based crisis services, specialized crisis facilities, and partnership with law enforcement. *Focus*, *21*(1), 18–27. https://doi.org/10.1176/appi.focus.20220074

Békés, G., & Kézdi. G (2021). *Data analysis for business, economics, and policy.* Cambridge University Press, Cambridge. UK.

Brennaman, L. (2015). Exceeding the legal time limits for involuntary mental health examinations: A study of emergency department delays. *Policy, Politics, & Nursing Practice*, *16*(3–4), 67–78. https://journals.sagepub.com/doi/10.1177/1527154415602296

Bonynge, E. R., Lee, R. G., & Thurber, S. (2005). A profile of mental health crisis response in a rural setting. *Community Mental Health Journal, 41*(6), 675–685. https://doi.org/10.1007/s10597-005-6427-2

Castro, A., & Burns, R. (2006, August). *Mental health and substance abuse in Idaho.:* Budget and Policy Analysis, Legislative Services Office, Boise, Idaho. https://legislature.idaho.gov/wp-content/uploads/sessioninfo/2006/interim/mentalhealth_budgetbrief.pdf

Curry, J, Sloan, L., Rush, W. K., & Gulrajani, C. (2023). The changing landscape of mental health crisis response in the United States. *The Journal of the American Academy of Psychiatry and the Law, 51*(1), 6–12. https://doi.org/10.29158/jaapl.220111-22

Disability Rights Idaho. (2015, June 24). *Idaho's mental health system and the ADA "IntegrationMandate*." https://web.archive.org/web/20160507220316/http:/disabilityrightsidaho.org/idahos-mental-health-system-and-the-ada-integration-mandate/

Gillooly, J. W. (2020). *" 911, is this an emergency?": How 911 call-takers extract, interpret, and classify caller information* [Doctoral dissertation, University of Michigan]. https://deepblue.lib.umich.edu/bitstream/handle/2027.42/163046/jgillool_1.pdf

Health Resources & Services Administration. (2024, November). *State of behavioral health workforce, 2024.* https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/state-of-the-behavioral-health-workforce-report-2024.pdf

Health Resources & Services Administration. (2025, March 31). Designated health professional shortage areas statistics, second quarter of fiscal year 2025.

Health Resources & Services Administration. (n.d.). *HRSA Fact Sheets*. https://data.hrsa.gov/data/fact-sheets

Health Resources & Services Administration. (2023, June.) *What is shortage designation*? Accessed May 31, 2023, from https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation

Health Resources and Services Administration. (2020, June 25). *Health professional shortage areas (HPSAs) and medically undeserved aeras/populations (MUA/P) applicatioin review process*. https://www.ecfr.gov/current/title-42/chapter-I/subchapter-A/part-5

Hedman, L. C., Petrila, J., Fisher, W. H., Swanson, J. W., Dingman, D. A., & Burris, S. (2016). State laws on emergency holds for mental health stabilization. *Psychiatric Services*, *67*(5), 529–535. https://doi.org/10.1176/appi.ps.201500205

Idaho Legislature. (n.d.). *Idaho Statutes: Title 66 State Charitable Institutions*. https://legislature.idaho.gov/statutesrules/idstat/title66/t66ch3/

Idaho Office of Performance Evaluation. (2016, January). *Design of the Idaho behavioral health plan*. Idaho Legislature, Boise, Idaho. https://legislature.idaho.gov/wp-content/uploads/OPE/Reports/r1601.pdf

Idaho State Behavioral Health Planning Council. (n.d.). 2021 *State behavioral health planning council governor's report*. https://publicdocuments.dhw.idaho.gov/WebLink/DocView.aspx?id=21502&dbid=0&repo=PUBLIC-DOCUMENTS

Klaus, J. (2021). *Beyond the lights and sirens: The challenges reported by paramedics about responding to 911 behavioral health emergencies* [Published honors thesis, Atlanta: Emory University]. https://etd.library.emory.edu/concern/etds/1831cm07k?locale=en

Lamb H. R., & Weinberger L. E. (1988). Persons with severe mental illness in jails and prisons: a review. *Psychiatric Services, 49*(4) 483–492. https://doi.org/10.1176/ps.49.4.483

Larkin, G. L., Claassen, C. A., Emond, J. A., Polletier, A. J., & Camargo, C. A. (2005). Trends in U. S. emergency department visits for mental health conditions, 1992 to 2001. *Psychiatric Services, 56*(6), 671–677. https://doi.org/10.1176/appi.ps.56.6.671

Makin, D. A., Carter, P., & Parks, M. (2023). Examining implementation of crisis centers on police officer emergency hold petitions. *Community Mental Health Journal, 59*(6), 1150–1162. https://doi.org/10.1007/s10597-023-01097-y

McCann, T. V., Savic, M., Ferguson, N., Bosley, E., Roberts, L., Emond, K., & Lubman, D. I. (2018). Paramedics' perceptions of their scope of practice in caring for patients with non-medical emergency-related mental health and/or alcohol and other drug problems: A qualitative study. *PLOS ONE, 13*(12). https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0208391

McGinty, B. (2023). The future of public mental health: Challenges and opportunities. *The Milbank Quarterly*, *101*(S1), 532–551. https://doi.org/10.1111/1468-0009.12622

Merelli, A. (2023, May 2). Half of US mental health workers are considering getting out. *QUARTZ Business News*. https://qz.com/half-of-us-mental-health-workers-are-considering-gettin-1850391460

Milette-Winfree, M, Orimoto, T., Preston-Pita, H., Schwiter, G., & Nakamura, B. J. (2020). Improving rural mental health service quality through partnerships and innovation. *The Journal of Rural and Community Development*, *15*(1), 33–48. https://journals.brandonu.ca/jrcd/article/view/1628/404

Misek, R. K., BeBarba, A. E., & Brill, A. (2015). Predictors of psychiatric boarding in the emergency department. *The Western Journal of Emergency Medicine*, *16*(1), 71–75. https://doi.org/10.5811/westjem.2014.10.23011

Moroney, K. (2015, April 5). Mental health services in crisis: Idaho's failing focus. *The Lewiston Tribune*. https://www.lmtribune.com/northwest/mental-health-services-in-crisis-idahos-failing-focus-0d3c7fed

Nordstrom, K., Berlin, J. S., Nash, S. S., Shah, S. B., Schmelzer, N. A., & Worley, L. L. (2019). Boarding of mentally ill patients in emergency departments: American Psychiatric Association resource document. *Wesetern Journal of Emergency Medicine, 20*(5), 690–695. https://doi.org/10.5811/westjem.2019.6.42422

O'Meara, P., Maguire, B. J., & O'Neill, B. (2019, October 8). Protecting EMS personnel from assault. *Journal of Emergency Medical Services*. https://www.jems.com/ems-operations/protecting-ems-personnel-from-assault/

Papajohn, H. D. (2023, May 8). Challenges with funding, financial incentives and stigma. *Counseling Today*. https://www.counseling.org/publications/counseling-today-magazine/article-archive/article/legacy/a-closer-look-at-the-mental-health-provider-shortage

Paradis, K. (2022, June 30). Escaping the fire: How mental health care providers can fight burnout. *Boston Children Hospital*. https://answers.childrenshospital.org/provider-burnout/

Rea, D. (2016, April 5). Ada County PET tackles mental health cases head-on. *Journal of Emergency Medical Services*. https://www.jems.com/mental-health-wellness/ada-county-pet-tackles-mental-health-cases-head-on/

Reinert, M., Fritze, D., & Nguyen, T (2021, October 19). The state of mental health in America 2022. *Mental Health America*. https://mhanational.org/wp-content/uploads/2024/12/2024-State-of-Mental-Health-in-America-Report.pdf

Rivard, M. K., Cash, R. E., Chrzan, K., Powell, J., Kaye, G., Salsberry, P., & Panchal, A. R. (2022). Public health surveillance of behavioral health emergencies through emergency medical services data. *Prehospital Emergency Care*, *26*(6), 792–800. https://doi.org/10.1080/10903127.2021.1973626

Roennfeldt, H., Wyder, M., Byrne, L., Hill, N., Randall, R., & Hamilton, B. (2021). Subjective experiences of mental health crisis care in emergency departments: A narrative review of the qualitative literature. *International Journal of Environmental Research and Public Health*, *18*(18), 9650. https://doi.org/10.3390/ijerph18189650

Santillanes, G., Kearl, Y. L., Lam, C. N., & Claudius, I. A. (2017). Involuntary psychiatric holds in preadolescent children. *The Western Journal of Emergency Medicine*, *18*(6), 1159–1165. https://doi.org/10.5811/westjem.2017.8.35114

Scheid, T. L., & Smith, S. M. (2021). *Ties that enable: Community solidarity for people living with serious mental health problems*. Rutgers University Press.

Smith, M. K. & Strobel, A. T. (2020, March 11). An overview of involuntary mental health holds in Idaho. *Idaho State Bar.* https://isb.idaho.gov/blog/an-overview-of-involuntary-mental-health-holds-in-idaho/

The Pew Charitable Trusts. (2022, July 28). When behavioral health emergencies arise, who responds can affect outcomes. *Pew.* https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2022/06/when-behavioral-health-emergencies-arise-who-responds-can-affect-outcomes-

UnitekEMT. (2021, February 11). How to treat behavioral and psychiatric emergencies. *UnitekEMT*. https://www.unitekemt.com/blog/behavioral-and-psychiatric-emergencies/

Zeller, S. L., Calma, N. M., & Stone, A. (2014). Effects of a dedicated regional psychiatric emergency service on boarding of psychiatric patients in area emergency departments. *The Western Journal of Emergency Medicine*, *15*(1), 1–6. https://doi.org/10.5811/westjem.2013.6.17848