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How a Stressed Local Public System Copes With People in Psychiatric Crisis

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Abstract

In order to bolster the public mental health safety net, we must first understand how these systems function on a day-to-day basis. This study explored how individual attributes and organizational interdependencies within one predominantly urban US county affected responses to individuals' needs during psychiatric crises. We interviewed clinicians and managers within the crisis response network about people at immediate risk of psychiatric hospitalization, what had happened to them during their crises, and factors affecting services provided ($N = 94$ individuals and 9 agencies). Social network diagrams depicted patterns of referrals between agencies. Iterative coding of interview transcripts was used to contextualize the social network findings. Often, agencies saw crises through to resolution. However, providers also limited the types of people they served, leaving many people in crisis in limbo. This study illustrates how attributes of individuals with mental illness, service providers and their interactions, and state and federal policies intersect to shape the trajectories of individuals during psychiatric crises. Understanding both the structures of current local systems and their contexts may support continued evolution toward a more humane and robust safety net for some of our society's most vulnerable members.

Keywords

Crisis; Networks; State psychiatric hospitals; Access to care; Regulation

For some people with severe mental illness, periodic episodes of escalating symptoms posing risks of harm to self or others may not be fully preventable. Thus, an essential component of the mental health system is the capacity to care for people in psychiatric crisis. Communities around the US struggle to help people experiencing crises re-stabilize in the least restrictive environments possible. In keeping with this goal, use of state psychiatric hospitals has dramatically decreased over the last fifty years [1]. However, local resources have not increased accordingly, often leaving incomplete and fragile networks of services [2].

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Recently, public mental health systems have shown increasing signs of strain. Demand for psychiatric hospital beds has been increasing even as the number of beds has continued to decrease [3]. Individuals in crisis have been detained in hospital emergency departments for days or even weeks because of a lack of available psychiatric beds [4,5]. Other people who cause public disturbances are jailed, many to be released and then jailed again when they have another crisis [6].

Prior research has examined broad-based local public mental health systems as inter-organizational networks [7–11], as well as factors affecting psychiatric admission versus discharge from hospital emergency departments [12–14]. However, to our knowledge, no prior research has examined what happens to people whose psychiatric crises manifest in a variety of local contexts, and why. To address this gap, the current study focused specifically on one large county's network of public psychiatric crisis response services.

Identifying, treating, and releasing people from psychiatric crisis care all present organizations with high levels of uncertainty and risk [15]. This is largely due to the nature of severe mental illness. Assessing the threat these individuals pose to self or others entails sifting through ambiguous signals, often obscured by substance use. Treating identified crises remains fraught with uncertainty because of reliance on individuals whose behaviors are often unpredictable. Determining that a crisis has ended is also uncertain, and making such a decision prematurely can result in death.

Another source of uncertainty for crisis responders is their interdependence with other agencies. In the short term, crisis services are characterized by sequential interdependence, whereby outputs from one stage (e.g., a police intervention) become inputs to another stage (e.g., the hospital emergency department) [16,17]. How one stage is managed can thus directly affect the success of the next. For instance, the way police interact with people in crisis can determine whether those individuals go to a therapeutic environment or to jail. Over the longer term, crisis services are characterized by reciprocal interdependence as many people with severe mental illness cycle repeatedly through the system [17]. Hence, over time apparently separate parts of the system affect each other. This is a particularly challenging context for coordination both because of the risks attendant to short-term referrals and because other parts of the system affect future demands each given agency will later face.

Prior organizational theory prescribes that situations of reciprocal interdependence are best addressed through mutual adjustment because "Standardized response rules are inadequate" [17, p. 73]. However, laws and regulations governing crisis response may impose such standardization. For instance, state mental health authority contracts often specify which local agencies oversee public mental health services and how. In addition, US federal regulations prohibit hospital emergency departments from discharging people to less intensive services until they have been medically stabilized [18], and other laws outline conditions permitting involuntary commitment to psychiatric care [19]. Crisis response networks may thus be more analogous to legal systems than to some other forms of health care organizational cooperation [16].

Our interest in the current study was in how agencies responded to people in psychiatric crisis and how individual, agency, inter-agency, and local and state policy contexts factors affected these responses. Focusing on a single predominantly urban county in the Southeastern United States, we therefore sought to address the following questions: (1) What is the profile of people identified at immediate risk of psychiatric hospitalization by members of the crisis response network? (2) How do agencies respond to these individuals?

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And (3) What factors shape how these crises are addressed within an increasingly strained public mental health system?

Methods

Design

The lack of prior research on inter-agency behavior in crisis response networks led us to use a case study approach [20] to elicit both shared and divergent understandings of crisis response decisions. Quantitative data were used to characterize the population of people encountered in psychiatric crisis and the patterns of referrals between crisis responders. Interviews with agency representatives were used to understand how the attributes of individuals intersected with agency capacity and inter-agency referral practices, and how public mental health funding and regulations affected these dynamics.

Participating Agencies

This study focused on the core set of agencies in the Bloomfield County (pseudonym) public mental health crisis response network. We bounded this network to include agencies providing services to at least six individuals per month who were at immediate risk of psychiatric hospitalization, whether or not they were actually hospitalized. Bloomfield is a large, predominantly urban county with significant numbers of residents who are African American (over 33%) and Latino (over 10%); diverse health and human services, including a major university and Veterans Affairs health services center; and a poverty rate approaching 20%, comparable to that of the state as a whole [21]. The mix of health and human service agencies and social-economically diverse population are characteristic of many US mid-sized urban and exurban areas.

The initial sampling frame was developed in consultation with individuals familiar with Bloomfield's mental health system. During interviews, study participants also confirmed that the list of agencies represented all key crisis responders for the county. The final list was comprised of ten agencies, most of which are referred to here by pseudonyms. The Mental Health Crisis Facility was operated by a non-profit agency through a contract with the state's mental health authority. As the portal of entry into the county's public behavioral health system, the Crisis Facility took initial calls from agencies and individuals about psychiatric crises and either provided treatment at their clinic or, when unable to manage the presenting problems, referred to other providers. The state also contracted with the same agency to provide a mobile crisis team for the county.

Eastern State Psychiatric Hospital served the region including Bloomfield County, providing both short- and long-stay treatment for patients whose needs could not be met by community agencies. University Hospital was part of an academic medical center serving the area. Because people could be referred from University Hospital's emergency department to either its own inpatient psychiatric unit or alternative facilities, we conducted separate interviews addressing the hospital's emergency department and inpatient psychiatric unit, respectively.

Community Hospital was a general hospital affiliated with University Hospital that had both a psychiatric emergency department and an inpatient psychiatric unit. At Community Hospital, we were only able to interview a representative of the inpatient psychiatric unit; however, other agencies were asked separately about referrals to and from this hospital's inpatient unit and emergency department. The fourth hospital-based facility in the study was a Veterans Affairs (VA) Emergency Psychiatric Program, which provided psychiatric evaluations and short-term outpatient services. This unit worked closely with the VA's

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outpatient primary care and mental health clinics. The Bloomfield VA also served as a regional facility for a number of other counties in the state.

Two local service providers were each chosen to represent a different class of agencies peripheral to the crisis response system that nonetheless frequently encountered people in psychiatric crisis. Family Services, a large provider of mental health therapy and psychiatric services in Bloomfield, was included to represent outpatient providers. Christian Services was chosen as a major provider of services for people currently or at risk of being homeless.

The final two entities included were the Police Department and County Jail. The police had responsibility for the central city and the sheriff's department patrolled areas outside the city limit and operated the county jail. Although we were unable to interview anyone at the Bloomfield Sheriff's Department, we did interview a representative of the county jail. Other agencies' reports of referrals from the Sheriff's Department and Community Hospital's emergency department were reflected back onto these two agencies, thus allowing us to keep them in the network analysis.

Three other agencies were initially considered for inclusion in the crisis response network, but when contacted reported encountering fewer than six people per month at immediate risk of psychiatric hospitalization, and were therefore excluded: a psychosocial rehabilitation facility; a transitional living facility for people with mental health and substance use-related disorders; and a community health center.

Interview Process

A semi-structured interview protocol built on prior social network analyses [22] and also incorporated new items developed by the study team to elicit information about factors found in prior research to affect people in psychiatric crisis [23–25]. The principal investigator and lead interviewer pre-tested and refined the protocol through cognitive interviews with three individuals engaged in crisis response in a nearby county [26]. The resulting protocol included prompts ensuring that the respondent was able to answer any given question (e.g., 'Do you have a sense of how many people in psychiatric crisis your [agency or identified subunit] encounters?' [if not:] 'Could you suggest who might be able to provide that estimate?') and validating mutual understanding of each question (e.g., 'So, about [repeat] number of people per week in such a crisis?').

Pairs of study team members conducted face-to-face interviews with a total of 13 individuals at the nine participating agencies between July and December 2010. The lead interviewer had a master's degree in public health and prior experience in behavioral health qualitative research. The principal investigator had substantial prior experience in qualitative and behavioral health care research. In addition to the cognitive interviews, the lead interviewer and principal investigator also conducted the first three interviews in the study sample together. In subsequent interviews, the lead interviewer was accompanied by a research analyst with a bachelor's degree in health policy after that individual had reviewed initial interview transcripts and participated in research team review of those interviews.

At each agency, we asked to speak to whoever could best describe (1) the agency's role in psychiatric crisis response in general, (2) how the agency had responded to ten individuals recently at immediate risk of psychiatric hospitalization, and why they responded the way they had to each person, and (3) aggregate patterns of crisis referrals to and from each other member of Bloomfield's crisis network. At some agencies, one person was able to address all three questions. At others, up to three individuals addressed different questions. Prior to interviews, study participants were mailed a worksheet to note requested information about each (de-identified) individual encountered in their sample of ten and a separate worksheet

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estimating aggregate referrals to and from other agencies. During the interview, a member of the study team reviewed the worksheets with the participant(s), first reviewing information about each individual recently seen and then ensuring that the participant had understood each item about aggregate referrals to and from each other organization or key subunit (emergency department or inpatient unit) within the crisis response network. The mean interview time was 66 minutes, with a range of 40 minutes to two hours. The Institutional Review Board at the lead author's institution approved procedures for data collection and reporting.

Measures

Agency respondents were asked to record the following items for each person on their list of ten recently encountered individuals: basic demographics (age and sex), psychiatric and psychosocial factors (diagnosis, risk of harm to self or others, whether homeless, prior hospitalizations), whether the agency provided any therapeutic services to that person during the crisis, if and where the agency referred the person during the crisis, and the length of delay if any when a transfer did occur.

Each respondent was then asked to indicate whether their agency sent and/or received referrals of people in crisis from each other agency in Bloomfield's crisis response network. For those agencies with which they exchanged any referrals, each representative was asked to choose among the following options to indicate the approximate numbers of individuals per month sent and received, respectively: 1 for fewer than 4; 2 for "about 1–4"; 3 for "about 5–10"; and 4 for "more than 10." This strategy was based on prior experience indicating that ordinal counts were reported more reliably than absolute numbers [cites omitted for peer review]. These were the best estimates available for most study participants. However, Eastern Hospital was able to provide more accurate admission waitlist data instead.

Analysis

The samples of people in crisis were combined across participating agencies in an Excel spreadsheet and summary descriptive statistics were calculated. The jail representative did not have information about individuals recently seen, and so provided estimates. Those numbers were omitted from final statistics, although a comparison including those estimates had yielded generally similar results. Study participants were often not certain of individuals' housing status. Despite the resulting imprecision and likely underestimation, we retained this variable because of the importance of housing stability [27]. Because the network instrument eliciting aggregate patterns of referrals to and from other crisis responders used ordinal estimates rather than exact numbers, a rank order was used to indicate the relative magnitudes of referrals between agencies in the crisis response network.

All interviews were professionally transcribed and reviewed by one of the interviewers for accuracy. The lead author also read every transcript to become familiar with the interview content. Based on prior research on factors affecting psychiatric crisis disposition and pilot work for this study, the lead author developed a start list of codes [28]. Using Atlas.ti software, one member of the team [XX] applied these initial codes to all interview transcripts. Reviewing all coded text segments, these two members of the team [YY and XX] refined the codes to better reflect the nature of participants' comments in the current set of interviews. In addition, they added new codes to address emerging themes, such as perceptions within the network of the most central agencies and the ability of front line staff at non-mental health agencies to recognize mental health crises. Again, both authors reviewed the coded text segments, discussing any differences until they reached agreement. The lead author [YY] then drafted a report, initially including the text segments across all

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interviews viewed as supporting each conclusion. The entire study team reviewed these provisional conclusions, assessing each for its grounding in these text segments. The lead author revised interpretations based on group discussion, as well as minor feedback from one of the study participants on the initial report distributed to all agencies.

Pajek social network analysis software was used to generate the social network diagram shown in Figure 1 [29]. Each organization's ties were measured through that entity's reported number of crisis referrals received from each other network member, with the exception of the Sheriff's Department and Community Hospital's emergency department, for which other participants' reports served as the best available estimates.

Results

Psychiatric Crises and Dispositions

Table 1 presents descriptive statistics for the samples of people identified by participating agencies as recently at imminent risk of inpatient psychiatric hospitalization, pooled across agencies ($N = 94$, 9–13 per reporting agency or subunit). Study participants reported seeing mostly (90%) adults under 65 years of age. The very low number of children (3%) may reflect the extent to which parents and schools serve as first responders for pediatric psychiatric crises; parents of children with mental illness in this county have also reported to us in the context of a related study that they use a nearby county's health system because it has better pediatric psychiatric resources. Overall, 77% of the individuals were categorized by crisis responders as presenting risk of harm to self or others; the other 23% sometimes reflected staff determinations that initial threats had been overestimated or had diminished. The majority had high levels of psychiatric severity and persistent illness, frequently compounded by homelessness. As the homeless shelter representative put it: "'Man, I've been going to hospitals since I was a kid.' That's like the standard phrase.") The single largest category of referrals was by self, friends, or family.

On average, agencies reported providing medication management to 47% of the individuals they encountered in crisis, and psychotherapy to 35% (Table 1). Variations reflected both individuals' needs and agency capacity, with therapeutic services often being limited (e.g., in the hospital ED and jail) or nonexistent (for the police and homeless shelter). Almost half (46%) of the time, agencies reported keeping individuals through crisis resolution, although even in these instances the agency reporting on a given individual was not necessarily the first to encounter that person during the crisis. About as frequently (47% of the time), agencies referred individuals to other service providers, most often (40% of all individuals) to an inpatient facility. One common reason for referring people was lack of beds in the respondent's agency (12% of all individuals); however, the most common reason was that the individual was deemed violent or suicidal (23%). Limited private space and therapeutic services often made rapid referrals important. However, when agencies did refer individuals in crisis, only 32% occurred without delay.

Crisis Response Network Structure

Table 2 and Figure 1 illustrate the highly interdependent nature of Bloomfield crisis response. On average, key psychiatric crisis responders received referrals of Bloomfield residents in crisis from four other members of the crisis response network. Eastern State Psychiatric Hospital and Community Hospital's inpatient psychiatric unit received referrals from the greatest number of other *agencies* (9 each), followed closely by the Mental Health Crisis Facility (8) and the VA (7). The three entities that received the most *people* in crisis were Community Hospital's inpatient psychiatric unit, the Mental Health Crisis Facility, and Eastern State Psychiatric Hospital.

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Both social network data shown in Table 2 and Figure 1 and interviews revealed Eastern State Psychiatric Hospital as a critical back-up facility for people who required intensive services not available locally. The highest proportion of referrals from Bloomfield County to Eastern State Psychiatric Hospital was from University Hospital's emergency department, followed by the Mental Health Crisis Facility. Once an individual in crisis was admitted, Eastern State Psychiatric Hospital generally kept that person through crisis resolution.

Adaptive Response to Individuals' Needs

Social network and interview data suggest that Bloomfield agencies were largely successful in addressing people's needs or referring individuals to other entities. As intended by the state mental health authority, the Mental Health Crisis Facility served as a local network hub. The Crisis Facility's internal utilization data indicated well over 100 evaluations each month at their walk-in clinic, and short term stabilization for the majority at their site. During evaluation, Crisis Facility staff often determined that alternatives to hospitalization such as medication management, stabilization at their site, and/or referrals to community providers could meet individuals' needs. Evidence of their success included Christian Services' perception that they did "a very diligent job of trying to intervene with these folks so that they're getting the appropriate level of service and they're not utilizing the shelter…."

For veterans and their dependents, the VA Emergency Psychiatric Program bridged between acute and routine mental health care. Members of this team referred patients to clinics, and a nurse practitioner could follow up on medications prescribed during emergency department visits. VA clinic crisis management services could also support people who had long wait times for appointments in the general VA outpatient clinic. The program director reported that this team connected many newly returning combat veterans to community care.

The Police Department had also developed ways to meet the needs of the people they encountered who were in psychiatric crisis, including Crisis Intervention Team training. Police officers often worked with a judge who held court within the jail to divert people in psychiatric crises directly into mental health treatment, which could sometimes entail re-connecting with existing outpatient providers. For people jailed during psychiatric crises, jail social workers helped prepare for post-release transitions to community services. The primary focus while people were in jail was on limited crisis-focused medication management.

Signs of System Strain

Despite Bloomfield's abundance of high intensity services, people in crisis often did not enter therapeutic environments quickly if at all. For instance, some participants reported that police tended to default to University Hospital's ED or a homeless shelter instead of the system's intended portal of entry, the Mental Health Crisis Facility. Possible reasons cited were police inability to identify the psychiatric nature of some crises and individuals who did not initially communicate their symptoms clearly. The Christian Services homeless shelter's representative also believed that one reason police took people in crisis to the shelter instead of the Crisis Facility was because "it takes a whole lot of paperwork to [initiate mental health treatment]."

Once crises were identified, when referrals were necessary the majority were delayed. Although these delays were often under two hours, the average was about a day and the maximum reported was six days. Interviews suggested that local inpatient providers and Eastern State Psychiatric Hospital all struggled to meet the demands they faced from people in crisis. The most common recipient of crisis referrals in this county of over 200,000

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residents, Community Hospital's psychiatric unit, had fewer than 30 beds. The VA served only veterans and their families. University Hospital's ED had a pattern of crisis referrals virtually identical to that of the Mental Health Crisis Facility, but felt ill-equipped for this role.

In this constrained context, interviews suggested that risk – especially that posed by violent patients - often affected agency response. Some study participants saw the Mental Health Crisis Facility as avoiding individuals who posed even relatively low risk. One agency representative reported that the Facility's mobile crisis team "will not come out if a person is making threats … period." A participant reported that the Crisis Facility sent people to his hospital because of violence that was sometimes overstated. Acknowledging that the hospital had a larger staff and police, their representative nonetheless complained of the Crisis Facility: "They will say 'We just have two little old ladies working. There's a big, burly guy. He wants to knock things down.' I'll say, 'We just have two nurses there too.'"

In the eyes of many community agency respondents, Eastern State Psychiatric Hospital's role was to manage severe psychiatric problems and violence exceeding Bloomfield agencies' coping capacities. The flip side of this was that Eastern had the particularly resource-intensive role of caring for these individuals through stabilization. Fulfilling this role for a multi-county region created a backlog on Eastern's waitlists that often left Bloomfield agencies without a place to send people they could not handle themselves due to space and staffing constraints. In an attempt to reduce referrals into Eastern, the state mental health authority generally required providers to secure prior refusals from other hospitals before a patient would be eligible for admission. Due to demand overload on local hospital inpatient psychiatric units statewide, interviews suggested that this process in some instances became a formality.

To a large degree, Bloomfield's crisis responders sought to reduce their uncertainty by limiting their domains in terms of conditions addressed, populations served, and/or services provided [30]. Sometimes these limits were clear cut. For instance, Community Hospital did not address substance abuse or treat children. In addition, providers within Bloomfield County sought to avoid people who were violent, a risk factor whose boundaries appeared to be amorphous. As one hospital representative put it, "…[the patients] throw a chair, and the Mental Health Crisis Facility will send them to us… but that's not a real reason to be sending someone here." Although prior studies have found individuals' violence to increase their likelihood of psychiatric hospitalization [31,32], we believe this is the first to probe how providers' *avoidance* of individuals presenting these and other challenges affected a local crisis response system.

Restricting the types of people and conditions addressed may have been a rational strategy for individual agencies. However, the cumulative result for the system was one of reverberating rationing of crisis services that likely contributed to the high rate of delayed transfers. Rationing is generally a prioritization mechanism of last resort, employed after agencies' more proactive attempts to predict, smooth, or buffer themselves from unpredictable demand have failed [17]. One hospital received approximately 300 referrals in a month, and declined over 200 of them.

In Bloomfield, rationing affected both the ability to address needs during a given crisis and longer term interdependence, as many individuals periodically re-entered crisis services. In conversations with the study team for a related project, Eastern State Psychiatric Hospital clinical leadership noted frequent inability to discharge patients for long periods after they had stabilized and might have been better off in the community. This happened particularly with geriatric patients, non-US citizens, and individuals who frequently cycled through the

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crisis service system and had often “burned bridges” with previously available housing options. Once individuals with severe mental illness were back in community settings, the outpatient mental health provider in the study reported struggling to prevent or de-escalate crises. Reflecting on increasingly restrictive Medicaid service definitions, a Family Services therapist observed, “You go there [the patient’s home], you find a different situation, a different environment. So you have to change the dynamics. What am I going to do with this person? What do I do to keep this person out of the hospital today? It’s like a constant headache that we have to deal with every day, and with limited time to do it. Before you had all the time to talk to them and find out what’s going on. Now you don’t have that much time to do it.”

Recourse among Bloomfield crisis responders to the ‘unhappy solution’ of rationing [17] fits prior findings that conflict has particularly damaging effects on inter-organizational coordination in legally circumscribed contexts [16]. In Bloomfield, both state and federal policies shaped the psychiatric crisis system. Eastern State Psychiatric Hospital was staffed to handle even the most psychiatrically severe and violent patients, but had been substantially downsized by the state. The result of this rule-oriented system was coordination that worked for what might be characterized as ‘routine’ crises, but often broke down when individuals in crisis violated agency norms of acceptable uncertainty and risk, especially in relation to violence [15].

Discussion

Findings from the current study suggest that state and federal policies may in some respects foster rationing in local psychiatric crisis response. Organizational theory and empirical research suggest that clarifying organizational responsibility is especially important in difficult task environments [17,33]. In keeping with this prediction, Provan and Milward [9] found the best public mental health systems outcomes in a city whose coordinating agency was much more influential than the inpatient facility. In Bloomfield, the state mental health authority contracted with one entity for system coordination – the Mental Health Crisis Facility – but because of federal regulations ultimate responsibility for the highest risk individuals lay primarily with hospitals [18]. Despite their officially distinct network roles and the hospital’s preference for such distinctions, the patterns of referrals into the Mental Health Crisis Facility and one hospital’s emergency department were virtually identical. This disconnect between funding and responsibility created enduring conflicts within Bloomfield’s crisis response system [16], often played out in delays affecting people in crisis.

Local, state, and federal factors also interacted to constrain crisis response options. For instance, regulations prohibiting coverage of state psychiatric hospital care for 22–64 year olds through Medicaid and limited community services leave states absorbing all costs of care for adult patients in the state psychiatric hospitals. Allowing Medicaid coverage of state hospital care could encourage states to invest more in their capacity and thus alleviate strain within Bloomfield [34]. Local and state investment in other health and human services could also ease the strain on Bloomfield County’s crisis service system both by helping people return to community settings as quickly as possible after crisis resolution, thereby freeing inpatient capacity as well as reducing the rate of additional crises. Access to medication management, outpatient therapy, and other supportive services can also help avoid and reduce subsequent crises.

When crises cannot be averted, improving the information available to first responders may reduce the uncertainty they face. The high proportion of people in this study who self-referred into crisis services suggests that friends and family members could provide insights

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into what underlie a given situation and which response options are viable. In other field work, families of individuals in Bloomfield with mental illness have mentioned a need for such training among medical personnel as well as other first responders.

This study revealed distinctive dynamics of a crisis response network within a broader public mental health system. Even among health and human services, psychiatric crisis response is characterized by exceptionally high uncertainty and risk, as well as both short-term sequential and longer term reciprocal interdependence. In such contexts, findings from this study suggest that externally imposed regulatory constraints may tip a local system into a pattern of rationing, especially when staff encounter individuals whose behaviors violate their norms of acceptable behavior [15,17]. Such tactics, while rational for each agency in the short term, can make it more difficult for all system participants to both prevent and address crises. To the extent to which state and federal policies shape the structure of local crisis services, they may improve system responsiveness by aligning resources and responsibilities in ways that buffer agencies from uncertainty.

Cumulatively, this study shows that even in a county with four hospitals and extensive referral relationships, capacity constraints frequently leave people in psychiatric crisis in limbo. For instance, the Mental Health Crisis Facility successfully manages many psychiatric crises, and believes that local hospitals has capacity they lack to manage violent as well as medically complicated patients. At the same time, hospital representatives believe they are not equipped to handle violence either. Eastern State Psychiatric Hospital *is* equipped to treat violent patients, and yet faces demand that far exceeds its capacity – in part because it often cannot discharge patients who would be better served by community agencies. All of these local dynamics are affected by state and national health policies, including continuing efforts to contain public health care and public housing costs [35], that have weakened links in the already fragile chains of reciprocal interdependence.

This study had several limitations. Most notably, generality will be unknown until findings are replicated in other communities [20]. Although participants did refer to records to provide profiles and dispositions of a subset of recently encountered individuals, most agencies provided only rough estimates of the numbers of people in psychiatric crisis referred to and from other agencies. Participants in some instances noted respects in which their samples of individuals recently seen in crisis were not representative of the population they encountered overall (e.g., including a disproportionately high number of male and young patients, or low number of people who were homeless). Hence, the study results should be construed as illustrative of local crisis response dynamics at one point in time rather than definitive even with respect to this county.

Nonetheless, evidence suggests that Bloomfield’s results are not unique. Nationally, a growing shortage of psychiatric beds is straining local community crisis response capacities [4,5]. One recent study in the Boston area found a mean emergency department length of stay for psychiatric patients of 11.5 hours, virtually identical to the 10.9 hour transfer delay found in the current study’s ED. The same Boston study also found some especially vulnerable subgroups, such as older patients, the uninsured, substance users, and those who become agitated, experiencing disproportionate delays [36]. Communities are struggling to meet the needs of persons with mental illness largely with outpatient and other community-based services [1,2]. Critical to the success of these efforts is a coordinated network of service providers linking community services with available hospital-based inpatient care. Future research aimed at documenting these shortages and their implications for crisis service capacity and response in multiple communities is needed. Organizational theory perspectives and methods can serve as a framework for this research.

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Conclusion

In this study, people entering the public mental health system in psychiatric crisis often had severe and multiple illnesses. Many were homeless. The high proportion who self-referred or referred by family or friends into crisis services reflects the extent to which even individuals with severe mental illness manage their own well-being. However, when people experience psychiatric episodes, the usual vulnerability attendant to any health crisis is often compounded by disorientation, and sometimes by a degree of agitation that can greatly complicate efforts to provide help.

Crisis response services are an essential part of behavioral health care, assisting individuals and their families during very stressful situations and protecting the public by de-escalating conditions that otherwise could harm others. These services assure many front-line responders that, when situations arise that exceed their capacities, there are ways to help people who need immediate and intensive levels of care. This schematic examination of Bloomfield’s crisis response network highlights the organizational interdependencies and tensions that lie at the core of local public mental health systems. Learning how to manage these interdependencies will be a key challenge for local program managers in the years ahead.

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References

1. Brown, R. The New York Times. New York: The New York Times; 2012. Alabama Plans to Close Most Hospitals for Mentally Ill.
2. Lacey, M.; Sack, K.; Sulzberger, AG. The New York Times. New York: The New York Times Company; 2011. States’ Budget Crises Cut Deeply Into Financing for Mental Health Programs.
3. Manderscheid R, Atay J, Crider R. Changing trends in state psychiatric hospital use from 2002 to 2005. Psychiatric Services. 2009; 60(1):29–34. [PubMed: 19114567]
4. Schumacher Group. Emergency department challenges and trends: 2010 survey of hospital emergency department administrators. 2010; 2011
5. Brauser D. Psychiatric patients often warehoused in emergency departments for a week or more. Medscape Medical News. 2011
6. O’Shea, B. New York Times Reprints. Chicago, IL: 2012. Psychiatric Patients With No Place to Go but Jail.
7. Bickman L. The evaluation of a children’s mental health managed care demonstration. Journal of Mental Health Administration. 1996; 23(1)
8. Rosenheck R, Morrissey J, Lam J, et al. Service system integration, access to services, and housing outcomes in a program for homeless persons with severe mental illness. American Journal of Public Health. 1998; 88(11):1610–1615. [PubMed: 9807525]
9. Provan KG, Milward HB. A preliminary theory of interorganizational network effectiveness: A comparative study of four community mental health systems. Administrative Science Quarterly. 1995; 40:1–33.
10. Isett KR. The evolution of dyadic interorganizational relationships in a network of publicly funded nonprofit agencies. Journal of Public Administration Research and Theory. 2005; 15(1):149.
11. Milward HB, Provan KG, Fish A, et al. Governance and Collaboration: An Evolutionary Study of Two Mental Health Networks. Journal of Public Administration Research and Theory. 2010; 20(suppl 1):i125.

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12. Goldberg J, Ernst C, Bird S. Predicting hospitalization versus discharge of suicidal patients presenting to a psychiatric emergency service. Psychiatric Services. 2007; 58(4):561–565. [PubMed: 17412862]
13. Moseley C, Shen J, Cochran C. Mental health services availability and admission of the seriously mentally ill from the emergency department. Journal of health and human services administration. 2008; 31(3):292. [PubMed: 19209561]
14. Shen JJ, Cochran CR, Moseley CB. From the emergency department to the general hospital: hospital ownership and market factors in the admission of the seriously mentally ill. Journal of healthcare management/American College of Healthcare Executives. 2008; 53(4):268. [PubMed: 18720688]
15. Hasenfeld, Y. Human services as complex organizations. Sage Publications, Inc; 2009.
16. Hall RH, Clark JP, Giordano PC, et al. Patterns of Interorganizational Relationships. Administrative Science Quarterly. 1977; 22(3):457–474.
17. Thompson, J. Organizations in action: Social science bases of administrative theory. New York: McGraw-Hill; 1967.
18. Lee TM. EMTALA Primer. The Impact of Changes in the Emergency Medicine Landscape on EMTALA Compliance and Enforcement. An Annals Health L. 2004; 13:145.
19. Chamberlin J. User/consumer involvement in mental health service delivery. Epidemiol Psichiatr Soc. 2005; 14(1):10–14. [PubMed: 15792289]
20. Yin, R. Case study research: Design and methods. Sage Publications, Inc; 2009.
21. US Census Bureau. American FactFinder. 2010.
22. Morrissey J, Calloway M, Johnsen M, et al. Service system performance and integration: A baseline profile of the ACCESS demonstration sites. Access to Community Care and Effective Services and Supports. Psychiatric Services. 1997; 48(3):374. [PubMed: 9057241]
23. Baca-García E, Diaz-Sastre C, García Resa E, et al. Variables associated with hospitalization decisions by emergency psychiatrists after a patient's suicide attempt. Psychiatric Services. 2004
24. Biancosino B, Vanni A, Marmai L, et al. Factors Related to Admission of Psychiatric Patients to Medical Wards from the General Hospital Emergency Department: A 3-Year Study of Urgent Psychiatric Consultations. The International Journal of Psychiatry in Medicine. 2009; 39(2):133–146.
25. Brimblecombe N, O'Sullivan G, Parkinson B. Home treatment as an alternative to inpatient admission: characteristics of those treated and factors predicting hospitalization. Journal of Psychiatric and Mental Health Nursing. 2003; 10(6):683–687. [PubMed: 15005481]
26. Willis, GB. Cognitive interviewing: A tool for improving questionnaire design. Sage Pubns; 2004.
27. Chang G, Weiss A, Kosowsky JM, et al. Characteristics of Adult Psychiatric Patients With Stays of 24 Hours or More in the Emergency Department. Psychiatric services (Washington, DC). 2012
28. Miles, MB.; Huberman, AM. Qualitative data analysis: An expanded sourcebook. 2. Thousand Oaks: Sage Publications; 1994.
29. de Nooy, W.; Mrvar, A.; Batagelj, V. Exploratory social network analysis with Pajek. 2005.
30. Levine S, White PE. Exchange as a conceptual framework for the study of interorganizational relationships. Administrative Science Quarterly. 1961; 5(4):583–601.
31. Lidz CW, Coontz PD, Mulvey EP. The" pass-through" model of psychiatric emergency room assessment. International journal of law and psychiatry. 2000; 23(1)
32. Lyons JS, Stutesman J, Neme J, et al. Predicting psychiatric emergency admissions and hospital outcome. Medical Care. 1997; 35(8):792. [PubMed: 9268252]
33. Glisson C, Hemmelgarn A. The effects of organizational climate and interorganizational coordination on the quality and outcomes of children's service systems. Child Abuse and Neglect. 1998; 22(5):401–421. [PubMed: 9631252]
34. Frank RG, Goldman HH, Hogan M. Medicaid And Mental Health. Be Careful What You Ask For. Health Affairs. 2003; 22(1):101–113. [PubMed: 12528842]
35. Rice, D. Section 8 Rental Assistance Programs Are Not Growing as Share of HUD Budget. Washington, DC: Center on Budget and Policy Priorities; 2011.

36. Weiss AP, Chang G, Rauch SL, et al. Patient and Practice-Related Determinants of Emergency Department Length of Stay for Patients With Psychiatric Illness. Annals of Emergency Medicine. 2012

Biographies

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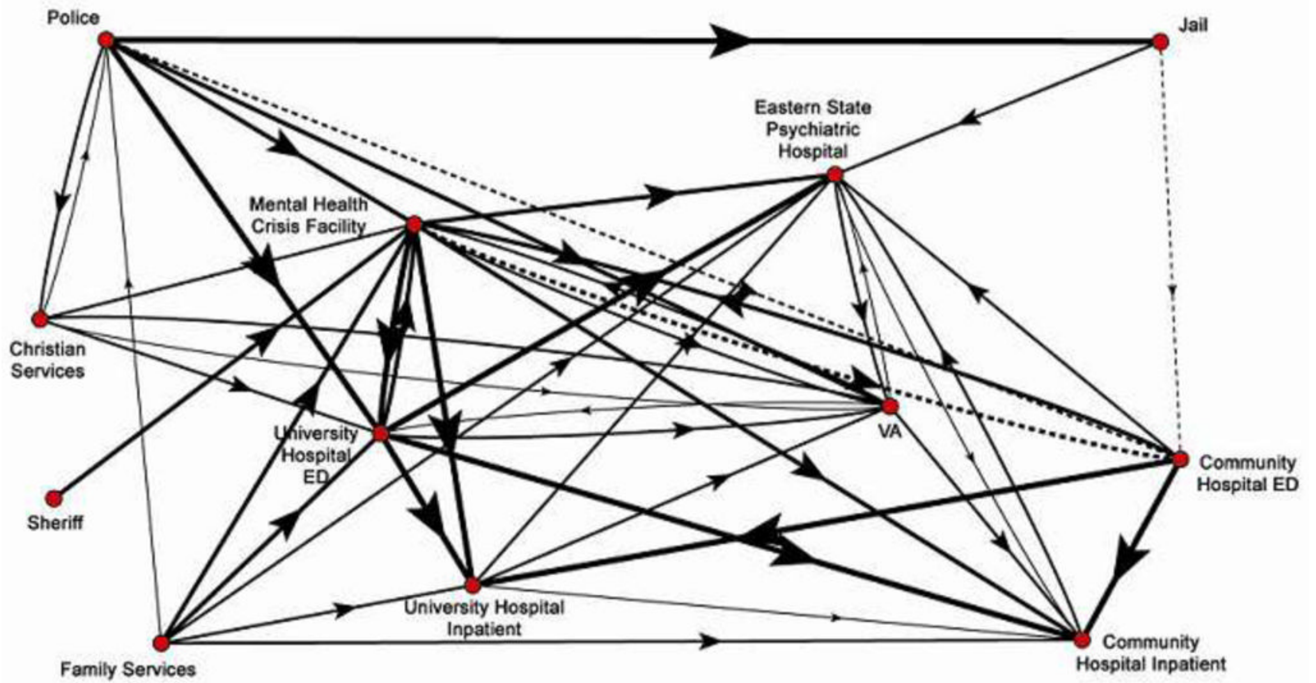

Figure 1. Referrals of people in psychiatric crisis within Bloomfield County crisis response network

This figure is based on each agency's report of how many people in crisis they received in a typical month from each other agency. Thicker lines represent higher volumes of referrals. The dashed lines into Community Hospital ED indicate use of other agencies' reports of referrals, given that we did not have a representative of the ED in the study.

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Table 1

Profiles of people in psychiatric crisis (n= 94, 9–13 per reporting unit)

Attribute	Percent
Age	
Under 18 years of age	3%
18–65 years old	90%
Over 65 years of age	6%
Sex	
Male	57%
Risk of harm to self or others (an assessment that may evolve during a crisis assessment)	77%
Diagnosis (not mutually exclusive)	
Depression, episodic mood disorder, including bipolar	49%
Schizophreniform, including psychosis	27%
Substance abuse-related disorder	32%
Anxiety/stress/adjustment disorder, including PTSD	15%
Other, including dementia, mental retardation/developmental delay	12%
Unknown	11%
Personality disorder	6%
More than one diagnosis identified (undoubtedly an underestimate)	40%
Prior hospitalizations (likely understated as unknown to some units)	57%
Homeless (also often unknown to units and hence likely understated)	30%
Referral source (not mutually exclusive)	
Self, friend, family	52%
Jail, law enforcement, Emergency Medical Services (EMS)	13%
University Hospital Emergency Department	13%
Bloomfield Mental Health Crisis Facility	8%
911 calls (as described in interview; not clear whether police or EMS responded)	8%
University Hospital Psychiatric Ward	2%
Bloomfield Community Hospital	1%
Other hospitals	3%
Group home	3%
Emergency Medical Services (likely originating in 911 calls, listed above)	2%
Outpatient provider	2%
Other	3%
Services provided by participating organization during crisis	
Medication management	47%
Therapy	35%
Disposition	
Organization kept the individual through crisis	46%
Referred elsewhere	47%

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Attribute	Percent
Released to home or community	3%
Individual refused services offered	3%
Disposition of the 53% of individuals not kept by a particular organization through crisis:	
Referred to an inpatient facility	40%
Referred for outpatient care	6%
Went to permanent or temporary housing	3%
Went to jail	2%
Still waiting for disposition as of interview date	1%
Reasons why 53% of individuals were not kept through crisis period	
Individual was violent/suicidal	23%
Limited bed capacity	12%
Longer term care was needed	2%
Patient preference	4%
Other	12%
How often transfer to a receiving entity was immediate	32%
	Days
Mean delay when participants were able to estimate (n=36)	1
Range of reported delays in transfers when not immediate	6

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Table 2

Referrals of people in psychiatric crisis

Agency	**Referrals Received**	
	Number of other agencies/units sending referrals to this agency	**Rank order of number of people referred from other agencies in this list**
Mental Health Crisis Facility	8	2
Eastern State Psychiatric Hospital	9	3
University Hospital Emergency Department	6	5
University Hospital inpatient psychiatric unit	5	4
Community Hospital Emergency Department	3*	7*
Community Hospital inpatient psychiatric unit	9	1 (highest volume)
VA	7	6
Family Services	0	Tied for 10
Christian Services	2	Tied for 8
Police	3	9
Sheriff	0*	Tied for 10
Jail	1	Tied for 8
Average	**4**	

*not interviewed – numbers based on other agencies' reports of referrals to them