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A Profile of Mental Health Crisis Response in a Rural Setting

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ABSTRACT: Systems of crisis intervention are frequently difficult to operationalize; they are often described as crisis components rather than systems, fail to differentiate levels of crisis acuity, provide very limited fundamental utilization data, and are almost exclusively implemented in urban areas. A system of rural crisis intervention differentiating levels of acuity and fundamental utilization information was profiled. Implications for clinicians and administrators are presented. This system of crisis intervention was highly effective in reducing inpatient utilization with the help of crisis residential beds and partial hospitalization. Mobile response was infrequently used in this setting. Age and gender were important variables in mental health emergency situations. Use of acute crisis level services was rarely more than once. More systematic descriptions of crisis systems of care were encouraged.

KEY WORDS: mental health crisis; mobile crisis; rural mental health.

A PROFILE OF MENTAL HEALTH CRISIS RESPONSE IN A RURAL SETTING

The term "crisis" is a very general term that evokes considerable emotion and interpretation. This is especially true with respect to mental health crisis situations. Both lay persons and professionals alike have idiosyncratic notions of what constitutes a mental health

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crisis. Inconsistency in operationalizing "mental health crisis" has complicated research efforts in the area of crisis intervention (Callahan, 1994; Ferris, Schulman, & Williams, 2001; Munizza et al., 1993). Anyone who completes a literature search on the topic of mental health crisis will note a number of services bundled under this rubric: e.g., crisis hot-line, urgent care, residential crisis, police education, critical incident interventions, assertive outreach, and mobile crisis intervention. There exists a need for greater clarity with respect to crisis programs, their components, coordination, and characteristics of the people they serve.

A second issue surrounding mental health crisis service definition is the lack of fundamental utilization, disposition, and outcome data. When do emergencies occur? With which age groups? Are there monthly variations? Do males make more use of crisis intervention services than females? What are some of the fundamental characteristics of people served? There are only a handful of crisis service profiles that address one or more of these questions (Cornelius, Simpson, Ting, Wiggins & Lipford, 2003; Sullivan & Rivera, 2000).

Finally, the settings in which crisis services are delivered need to be carefully considered. Crisis services have been developed and studied exclusively in urban and metropolitan areas. This raises important issues for crisis service development in rural areas where population density severely limits options. Certain components or models of crisis intervention may not be practical or cost effective.

This article endeavors to profile a crisis intervention program in a rural setting serving adults who experienced crises at two levels: Moderate and Severe. The Moderate level of intervention typically consisted of urgent care (within 72 hours) and a crisis hot line. This level of crisis was generally non-acute in clinical presentation and, in many ways, constituted what many distinguish as "crisis" work (Callahan, 1994). The Severe level of our crisis program addressed what we termed a mental health emergency. It was our experience that individuals experiencing a mental health emergency demonstrated three or more of the following conditions: (1) danger to self, (2) danger to others, (3) significant confusion, (4) significant depression, and (5) significant functional decline. This became our operational definition of a mental health emergency. Services at this level of our crisis program typically consisted of a professional on-call service (rendering immediate assessment and follow-up care), crisis beds (typically less than 72 hours), and mobile crisis within a community mental health center (CMHC) situated in a rural area of the mid-west. Characteristics of clients served by this crisis

intervention system were monitored, as was utilization data of crisis services in terms of day of the week, time of day, and month of the year. We expected to acquire some important descriptive information that would contribute to the general literature on mental health crisis intervention strategies as implemented in a rural area.

METHOD

Setting

The CMHC involved in this study is structured along the lines of a comprehensive federal model. The organization is a private not for profit with a geographic area of 4500 square miles and encompassing a population of approximately 114,000 people. This area qualifies as rural by federal definition situated in a mid-western state of the USA. Approximately 2900 clients are enrolled in any given month within a year. An average of 104 new cases is identified each month. Approximately 52% of all clients are female and 48% male with 91% of Caucasian descent. The major referral sources are self, friend or family, physician, law enforcement, schools, social services, and other treatment providers. The organization has a diverse funding base. A total of six clinic sites are situated throughout the service area.

Crisis services within this CMHC are a distinct but integrated part of a comprehensive array of outpatient mental health services. A mental health professional (MHP) assigned to the crisis service provides assessment and treatment planning for all persons during regular business hours. Other MHPs who provide "on-call" outside of ordinary business hours provide services to the primary outpatient service or some combination of other outpatient programs within the organization.

The goal of the CMHC's crisis services was to reduce the need for more restrictive levels of care (most typically, hospitalization). Achievement of this goal necessarily involves a focus upon symptom reduction (i.e. stabilization), reduction of suicide potential, and integration with other mental health or social service entities. These services were available to anyone, not just consumers already being served by the CMHC.

Utilization in the components of the crisis system (urgent care, crisis hot line, professional on-call, crisis beds, and mobile outreach) were gathered over 12 months beginning in March of 2003 through February of 2004. Referral sources to this crisis system came from self, friend or family member(s), physicians, emergency rooms, law enforcement, social services, and various other treatment providers.

Components of the Mental Health Crisis Service

Urgent Care. Within each clinic site, time is set aside or created for individuals who identify strong urgency to see a MHP within a 72-hour time frame. Usually, this is identified in the routine intake when consumers express concern that their regular appointment time is too distant and their symptoms/problem too intense. It is not uncommon for a consumer to appeal also to the good will of individual professionals to acquire services sooner due to their desperation. In a main clinic, regular hours are set aside for daily urgent situations. There is sufficient volume at this site to schedule accordingly. In the other five sites, intake workers and professionals juggle schedules to accommodate consumers in need of urgent services. Consumers are often scheduled over the noon hour or put into a failed appointment slot. This service does include some

urgent care by an Adult Board Certified Psychiatrist, which was only able to accommodate urgent sessions within a two-week time frame as opposed to 72 hours.

Crisis Hot-Line. A 24-7 crisis hot line is operated with an 800 number. This service is staffed by mental health workers and practitioners with nursing and MHP oversight. Phone calls are monitored, entered into a log, and categorized according to principal call issue. Only calls originating outside the CMHC dealing with mental health issues of adults were included. Intake calls and non-mental health consumers were excluded from our data.

Professional On-Call. This service is 24-7 staffed by licensed MHPs (doctoral and masters) working as a team with other 24-7 scheduled mental health workers, practitioners, and nurses. Psychiatry is also 24-7 on call by telephone. MHPs were required to respond face-to-face within 2 hours of any walk-in, or potential residential crisis bed admission. Approximately 13 professionals participated in the on-call service and they were paid a flat rate for their time. During regular business hours, mental health crises were handled by other MHP's, nurses, and practitioner level staff. The MHPs responding to consumers in this capacity were involved in assessment, determining disposition (i.e. returning home, crisis bed, partial hospital referral, inpatient referral, or mobile response) and providing clinical direction to nursing and practitioner staff. This service responded to mental health emergencies.

Crisis Beds

This service is a five bed 24-7 service with an average length of stay of approximately 2 days. Staffing consisted of 24-7 nursing, mental health worker, and practitioner level receiving oversight directly from MHPs and indirectly from on-call psychiatry. Admissions to the unit are screened by the psychiatrist on-call. Individuals admitted to a crisis bed completed a nursing screen and needed to be medically stable. When medical issues were of a concern, a local ER and medical urgent care were available for referral or further screening. Staff often rendered support, counseling, and client monitoring. A good deal of case management was also performed such as notification of significant others, case worker notification, triaging informational demands, and discharge planning. Crisis beds have been implemented successfully in a number of instances and have been useful in reducing inpatient utilization (Fenton, Hoch, Herrell, Mosher, & Dixon, 2002; Hawthorne, Green, Lohr, Hough, & Smith, 1999; Sullivan & Rivera, 2000). Admissions to this service met our operational definition of mental health emergency.

Mobile Crisis

Paraprofessional and nursing staff principally delivered this service with oversight by MHPs. The service was geared to respond to any number of settings including the client's home. It was made available only when the crisis, as determined by a telephone triage assessment, met the following requirements: (a) conform to our operational definition of mental health emergency (see above), (b) potential recipient was an existing client of the CMHC, (c) safety of staff could be assured, and (d) going mobile would have accomplished something not accomplished with existing options. In the event of community disasters, mobile crisis response was automatic.

RESULTS

Urgent Care and Crisis Hot-line

A total of 216 individuals for 290 hours were served in our Urgent Care component. Females constituted 55% of the recipients, which does not substantially differ from the overall organizational profile of 52% female. Urgent care utilization is likely an underestimate of what actually takes place. A number of people are put into schedules urgently but not recorded as such.

The crisis hot-line data have been consistent for a number of years. For adult mental health, a total of 2079 calls were responded to for the following purposes: crisis (4%), information and referral (20%), and support (76%). Of the crisis calls, 16 were from people contemplating suicide and an additional 2 for some other mental health emergency. Whenever a call appeared to constitute a mental health emergency, staff mounted some sort of response, typically to law enforcement to dispatch an officer for a "welfare check". The bulk of calls dealing with mental health issues were for support. A disproportionate number of those using the crisis hot line were female (61%) which differs from the overall organizational profile for female utilization (52%).

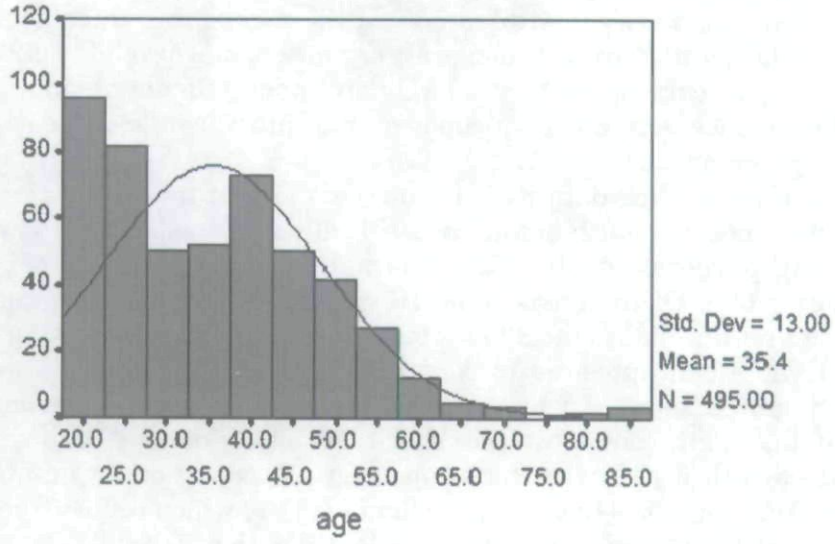
Professional On-Call and Mobile Crisis

Our data for Severe crises was more detailed. On-call MHPs responded to 511 incidents on 364 individuals in a one-year period. The mean age of these individuals was 35.4 (SD = 13) and ranged from 18 to 87. Figure 1 depicts the distribution of individuals with a superimposed normal curve. Mental health emergencies appear to decrease with age, but early adulthood and middle age especially troubling. Sixty two percent of utilizers were female. Consistent with the organizational profile on ethnicity, 9% of those served were minorities (principally Hispanic).

We had DSM IV diagnoses by MHPs on 306 of the individuals served. Broad band distinctions revealed the following: Depressive Spectrum (56%), Thought Disorder (25%), Adjustment Disorder (7%), and Other (12%). Within the Depressive Spectrum, the majority were Major Depressive Disorder, Recurrent with the remaining a variety of others such as NOS, Single Episodes, and Dysthymia. The Thought Disorder Spectrum encompassed diagnoses such as Schizophrenia, Schizoaffective, Psychotic Disorder NOS, and Manic Bipolar. Adjustment Disor-

FIGURE 1

Age Distribution of Crisis



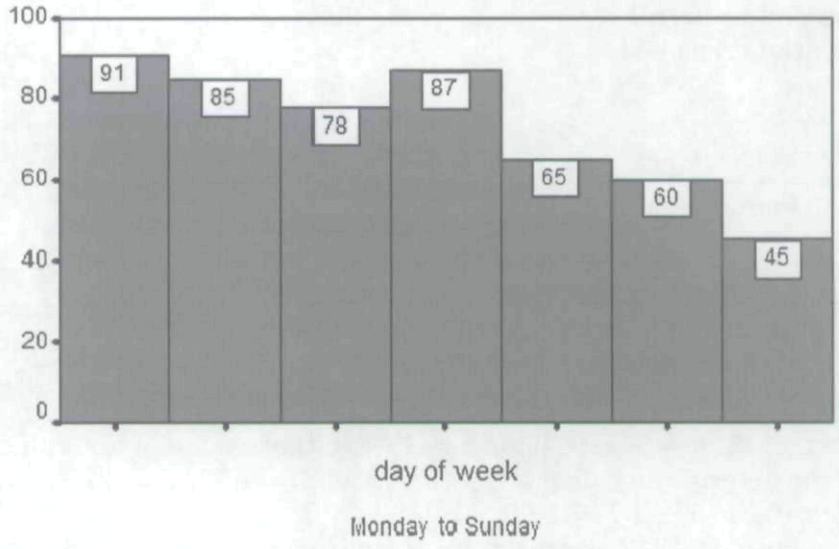
ders were principally with some mood or anxiety issues. Our "Other" category revealed a broad range of diagnoses comprised of Organic Brain Syndrome, Substance Abuse, Anxiety Disorder, Explosive Disorder and a few V Codes. Thirty five percent of individuals had a co-occurring substance abuse diagnosis. Sixty six percent of co-occurring substance abuse diagnoses were for alcohol.

When we analyzed usage of face-to-face (excluding crisis hotline contacts) crisis services at this level, some interesting findings emerged: one-time contacts (82%, $n = 299$), use of 2 contacts (11%, $n = 41$), and 3 or more contacts (7%, $n = 24$). Our data indicated that 93% of individual consumers use such a service two or fewer times in a 1-year period. Additionally, 20% of consumers receiving mental health emergency services had never previously been served by any of the CMHCs' programs.

Data on when crises occur in terms of hour of the day, day of the week, and month were also interesting. With respect to hourly utilization of mental health emergencies, we observed the following on 492

FIGURE 2

Crisis Utilization by Day



contacts: 8 AM to 5 PM (56%), after 5 PM to midnight (32%), and after midnight to 8 AM (12%). Figure 2 depicts day of the week crisis utilization. Monthly utilization averaged 42.5 with dips in utilization during November (33) and February (24) and peaks in utilization during August (49) and October (57).

Disposition of individuals presented to the professional on-call revealed some very important data. MHPs had five referral decisions (options) to make with mental health emergencies: supportive counseling with follow-up services, a crisis residential bed with an average length of stay generally less than 72 hours, triage to inpatient treatment, a short residential bed stay with partial hospitalization, or mobile response to another setting. Table 1 depicts the dispositions on 511 contacts.

Professionals are able to return people to their homes given that they have a supportive environment. The crisis bed was used for only short periods of time. Exceptions were those without any housing option(s) or adequate social support. Inpatient was used infrequently. A partial hospitalization program with a short residential stay reduced inpatient referral by 40%. Partial hospitalization has successfully been utilized in lieu of inpatient hospitalization (Horvitz-Lennon, Normand, Gaccione,

TABLE 1

Disposition of Mental Health Emergencies (n = 511)

Referral Decision	*n*	*Percentage*
Support and referral	202	40%
Residential crisis bed	204	40%
Inpatient	58	11%
PHP	38	7%
Mobile	9	2%

Note: PHP = Partial Hospital Program.

& Frank, 2001). The mobile option was infrequently used with three of the responses to community disaster, two to residential long-term group homes, and four to consumer's homes. Sex was not a significant factor in determining disposition χ^2 (4, n = 510) = 5.43, p = .25. Even if we factor out the mobile category (with low cells) significance is not reached χ^2 (3, n = 502) = 4.96, p = .18. Neither was age a significant factor in determining disposition, F(52, 442) = 1.52, p = .22; without mobile cells, F(52, 437) = 1.00, p = .48.

An additional 347 contacts were delivered on these individuals beyond the initial assessment. These contacts typically involved consumers coming back to an urgent care individual or family session, checking back with professional or paraprofessional staff as to status, following up on a treatment plan objective, or problem solving sessions.

DISCUSSION

Our finding that females are particularly high utilizers of Severe Level crisis services is likely accounted for by the incidence of mood disorders. Keep in mind that Depressive Disorders comprised 56% of our Severe Level contacts and the ratio of females to males for major depressive disorder is 2:1 (American Psychiatric Association, 1980). Although comparative data are rare, our findings are consistent with Ferris et al., (2003) who encountered 60% female crisis utilization for clients with severe mental illness. Males tended to access crisis services approximating females within urgent care. Females used a hot line to levels we encountered in our Severe Level of crisis service. We did not identify any mental health hot line data for comparison.

Age appears to be inversely related to the incidence of mental health emergency. Young and middle age adults access mental health emergency services the most. This finding would be consistent with notions of adolescent and adult development theory wherein stressors are higher in early and middle adulthood. Also, many mental health disorders do not manifest until early adulthood (APA, 1994). Minorities were not disproportionately represented in mental health emergencies (9%).

Most mental health emergencies occur during normal working hours (56%). Tacchi, Joseph, & Scott (2003) noted that only 30% of crisis referrals occurred outside of normal office hours. This is an important finding for those planning crisis services. Utilization of emergency mental health services drops dramatically after midnight (12%). This is also true for weekends. Most mental health emergencies do not occur on weekends. It is definitely more inconvenient on weekends, which may foster a perception of heavy utilization. Months with holidays, particularly those in winter, did not produce higher utilization. Many program administrators and social service administrators assume that crisis service utilizers are "frequent flyers". Our finding that only 7% of individuals used our Severe Level crisis services more than twice (82% one time) does not suggest that crisis services tend to encourage dependence or over-reliance on them. Most receive the necessary support and stabilize in a relatively short period of time. This has some important implications in terms of cost efficiencies.

A total of approximately 1148 hours of crisis service was delivered combining urgent and professional on call components. In this organization, this approximates to about one month of outpatient therapy delivered by our MHPs in a year.

This system of crisis services was quite successful in reducing inpatient utilization (11%). The lowest inpatient percentage we found was Brimblecombe, O'Sullivan, & Parkinson (2003)who recorded a 21% inpatient admission rate, after a median period of 11 days home treatment. However, settings and subjects make such comparisons difficult. The Partial Hospital Program, with concurrent use of a crisis bed, was successful in reducing inpatient referral. We compared our current inpatient referral data to a time period before partial hospitalization was available (1995) and discovered that our inpatient referral was reduced by over 40%. In 1995, our inpatient referral was 21% compared to 11% in 2003. We speculate that the combination of a crisis bed with partial hospital may be a cost-effective alternative for other settings to consider.

The mobile crisis option was infrequently used in this rural setting for several reasons. First of all, the major barrier to a mobile response in a rural area is distance. In a 4800 square mile area, mobile responses by MHPs or paraprofessionals add to the waiting and travel time for referral sources such as police. Potentially, this could triple their time. Another problem was MHP burnout. These were professionals who were not specifically dedicated to just crisis work. They worked a regular 8-hour day with crisis work additional. Also, MHPs and practitioners intervened with children and adolescents: this same system of crisis intervention was implemented with them. Burnout has been a major issue in sustaining crisis services (Reding & Raphelson, 1995) and mobile work likely more taxing than site based service.

Clinicians found a site based crisis service with supports to be a more viable option. The crisis unit site was centrally located in our geographic catchment area with usually no more than 60 minutes distance. Safety was often a concern with respect to mobile responses as was clinical responsibility. Consumers refused this level of response, on several occasions. Individuals in this region did not demonstrate a demand for mobile crisis response. Our criterion that any mobile response had to meet our operational definition of a mental health emergency (except in disasters) likely reduced this option. Many consumers expressed a desire to get out of a stressful environment (i.e. out of their homes) rather than remain in their environment. Finally, MHPs very seldom perceived any advantage of home based intervention over site based intervention. The ambiguity of mobile crisis services and their effectiveness is a growing concern (Geller, Fisher, & McDermeit, 1995; Ferris et al., 2001). Our experience may lend some insight into issues surrounding definition and hence evaluation. Whatever type of crisis service system a community or organization develops it seems highly important that it be multidimensional with reliance upon two or more components which maximizes coordination of existing resources.

We hope these data will be useful to other crisis service settings and encourage more publication of utilization in similar as well as different settings. Crisis service data for children and adolescents in this same rural area are being collected with results forthcoming. More empirical evidence of how components of crisis interface with one another for varying levels of crisis intervention is needed.

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