The Impact of System Design on the Characteristics of Missouri's Insanity Acquittees

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This study describes the characteristics of Missouri insanity acquittees, which numbered 797 on July 1, 1992. Unlike reports of characterization data from other states, the study endeavors to link the characteristics to the design of Missouri's insanity acquittee system. This is accomplished by analyzing Missouri's insanity acquittee system and comparing it with the system designs and characteristics of insanity acquittees from other states. Overall, Missouri has a high number of annual insanity acquittals, inpatient hospitalization is used as the primary residential setting for insanity acquittees, most insanity acquittees have severe mental illnesses, the majority of insanity acquittees committed serious crimes, most insanity acquittees are hospitalized for extended periods of time, and insanity acquittees now occupy over 50 percent of Missouri's long-term public psychiatric hospital beds. Evidence did not exist for a linkage between the design of Missouri's insanity acquittee system and most of the insanity acquittee characteristics. Further research is needed to identify system designs that can shape insanity acquittee characteristics in intended ways, to assess the degree to which policy implementors may influence the policy implementation process, and to explore the role of symbolic politics in shaping insanity acquittee systems.

The design of public policies can strongly influence policy outcomes.[1, 2] Policy design, implementation, and outcomes are linked together as a process that can be ongoing.[3] During the 1980s and 1990s, many states redesigned their insanity acquittee systems in an attempt to achieve different policy outcomes.[4] State legislatures can structure policy implementation to facilitate goal attainment by incorporating key system design features into insanity acquittee statutes.[5] In addition, policy implementors can establish internally designed systems to augment statutorily required insanity acquittee system components.[6, 7]

As the political climate in the United States has become more conservative in recent years, public safety considerations have increased in importance relative to the treatment needs and due process rights of insanity acquittees.[8] As a result, states are increasingly called upon to address public safety considerations in the

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design of their insanity acquittee systems. In doing so, one of the key normative decisions policy makers must make is the extent to which they restrict the individual rights of insanity acquittees to protect public safety.

In designing insanity acquittee systems, states can select from a range of procedural options that influence the balance between public safety and the treatment needs and rights of insanity acquittees. Brakel[9] and others have reviewed the procedural options available for the development of insanity acquittee systems. The design of Missouri's insanity acquittee system provides one example of the manner in which states weigh public safety issues against the treatment needs and due process rights of insanity acquittees.

Missouri policy makers have combined elements of its criminal justice and mental health systems to design an insanity acquittee system that supports public safety as the primary legislative goal. Missouri enacted its modern insanity acquittee statute (Chapter 552) in 1963,[10] and the legislature passed amendments in the 1980s and 1990s with the intent of strengthening public safety considerations and limiting use of the insanity defense. Key features of Missouri's insanity acquittee system include placing the burden of proof on defendants in the insanity plea process; hospitalizing all insanity acquittees at the time of acquittal who committed dangerous offenses; raising release standards for insanity acquittees who committed dangerous offenses; requiring court-ordered conditional releases; involving prosecutors and judges in the release process; monitoring insanity acquittees in the community; and allowing indefinite commitment of insanity acquittees to psychiatric hospitals or community supervision.[5] The treatment needs and due process rights of insanity acquittees are met within these strong public safety parameters.

Given the focus on system design and policy outcomes, this study has two purposes. The first is to provide more current descriptive information about Missouri's insanity acquittees. Morrow and Petersen[11] and Petrila[12] have published the only comprehensive descriptions of Missouri's insanity acquittees using data from 1962 and 1978, respectively. The current study includes characteristics of Missouri's insanity acquittees in the following areas: (1) number of insanity acquittals; (2) insanity acquittees' residential settings; (3) psychiatric diagnoses; (4) severity of not guilty by reason of insanity (NGRI) committing crimes; (5) lengths of hospitalization; and (6) the occupancy rate of insanity acquittees in Missouri's long-term public inpatient psychiatric hospitals.

The study's second purpose is to examine the extent to which the characteristics of the state's insanity acquittee population are a function of the design of Missouri's insanity acquittee system. Available data on Missouri insanity acquittee characteristics are examined to determine the degree to which they support the expectations associated with Missouri's system, which places a high priority on public safety relative to the treatment needs and due process rights of insanity acquittees. To strengthen the linkage between

system design and the characteristics of insanity acquittees, comparisons are made with other states when relevant data are available.

Methods

The primary source for insanity acquittee data was a cross-sectional survey of all insanity acquittees under the supervision of the Missouri Department of Mental Health on July 1, 1992, which numbered 797. Among this group, 88.3 percent were males and 11.7 percent females. In addition, 60.5 percent of insanity acquittees were Caucasian, 38.1 percent were African American, and 1.4 percent were of other races. The mean age of insanity acquittees at the time of acquittal was 32.9 years (SD = 10.9) and ranged from 17 through 91 years. The mean age of Missouri insanity acquittees on July 1, 1992, was 41.4 years (SD = 11.6) and ranged from 18 to 93 years.

As a cross-sectional database, this information has limited usefulness in assessing changes over time because it excludes insanity acquittees who have left Missouri's system. Data are currently not available in Missouri to provide a rigorous evaluation of the impact of changes in components of system design on policy outcomes that, for example, Steadman *et al.*[13] illustrate in their recent research. To strengthen the analysis, the study incorporated available longitudinal data from Missouri, which was limited.

To provide a stronger linkage between system design and the characteristics of its insanity acquittees, the study compares the system designs and insanity acquittee characteristics from other states. This approach also has limitations. First, a conceptual framework does not exist for the classification of the design of insanity acquittee systems along the continuum ranging from those with strong public safety orientations to those that emphasize the due process rights and treatment needs of insanity acquittees. While all insanity acquittee systems must consider public safety,[8] states differ in key system components as they attempt to balance public safety with other policy goals. For example, some states use civil commitment criteria for commitment and release decisions, while other states, such as Missouri, use criteria that are more restrictive. Such a framework would be useful for evaluating the impact of insanity acquittee *systems* in contrast to the *components* of systems. Ross, Rothbard, and Schinnar[14] recently developed a framework for the categorization of a continuum of system designs for involuntary civil commitment that could offer some guidance for the development of a similar framework for insanity acquittee systems.

Rather than examining system impact, research currently isolates a component of the system design and then assesses its impact along a limited range of insanity acquittee variables, such as the impact of revising the responsibility test on the use of the insanity defense.[15] While these quasi-experimental approaches lend themselves well to rigorous evaluation, they fail to take into consideration that components exist as a system. In the absence of a framework for classifying insanity acquittee systems, the author selects one or more components of insanity acquittee systems anticipated to influence characteristics of insanity acquit-

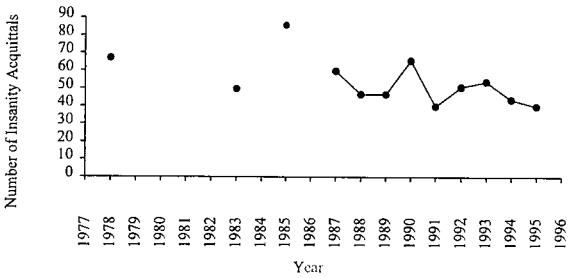

Figure 1. Estimated number of Missouri insanity acquittals by year.

tees based upon the insanity acquittee literature and experiences with Missouri's system. As such, this study is descriptive, and it is exploratory in its linkage between system design and insanity acquittee characteristics.

Number of Insanity Acquittals

It is expected that the number of Missouri insanity acquittals would be low because of the design features of the state's insanity plea and release processes. Missouri places the burden of proof on the defendant in the insanity plea process, which has been found to reduce the number of acquittals.[13] Missouri also restricted its responsibility test in 1993 by dropping the volitional prong, although the actual impact on reducing the number of insanity acquittals lacks empirical support.[15] Missouri now uses a modified McNaughten test, that being ". . . as a result of mental disease or defect he was incapable of knowing and appreciating the nature, quality, or wrongfulness of his conduct."[16] In addition, Missouri's use of automatic hospitalization following acquittal for most crimes, indefinite commitment to a psychiatric hospital or community supervision, and restrictive conditional and unconditional release procedures provide disincentives for Missouri defendants to plead NGRI, especially those who committed lesser offenses. To examine the degree of support for this expectation, the number of insanity acquittals in Missouri is compared with the number of arrests in Missouri and with the number of insanity acquittals in other states.

The annual number of insanity acquittals are available in Missouri for selected years only and are estimates. Neither the criminal justice nor mental health system in Missouri maintains ongoing, reliable records of insanity acquittals and releases, which is consistent with the practices of most other states.[17] Figure 1 graphs the best estimates of the number of annual insanity acquittals in Missouri. For the years data are available, the number of insanity acquittals ranged from a high of 86 in 1985 to a low of 40 in 1995, while the mean number of insanity acquittals for the 12 years for which data were available was 54.3 years (SD = 13.4). The results also suggest that a slight decline in the annual number of insanity acquittals has occurred in recent years. Since 1991, the number of acquittals was below the mean for the 12-year sample.

The identified range and mean number of Missouri insanity acquittals is low compared with the number of arrests in the state. For example, the Missouri State Highway Patrol reported 71,350 felony fingerprintable arrests and 31,498 misdemeanor fingerprintable arrests in 1991, indicating that far less than one-tenth of one percent of fingerprintable arrests result in insanity acquittals. These results are consistent with studies from other states.[18]

While the number of insanity acquittals in Missouri is low in absolute figures and relative to total arrests, it is high compared with the number of insanity acquittals in other states. In the most recent accounting of comparative insanity acquittals, McGinley and Pasewark[17] received information from 25 states on the actual or estimated number of insanity acquittees in 1985. According to the survey of the 25 reporting states, Missouri had 86 insanity acquittals in 1985, second only to New York with 88. The mean number of insanity acquittals among the reporting states was 26.9. Even if the Missouri estimate of 86 insanity acquittals in 1985 was high, and a more accurate reflection was the calculated mean of 54, this still placed Missouri sixth among the 25 reporting states.

McGinley and Pasewark[17] also computed a ratio of arrests to the number of insanity acquittals. Missouri had by far the highest rate, that being one insanity acquittal per 2,553 arrests. Maine had the next highest rate (5,342, based upon eight insanity acquittals), followed by Ohio (5,420, based upon 83 insanity acquittals). New York, which reported the most insanity acquittals for 1985, had a rate of 11,293 arrests per insanity acquittal. Recalculating the rate using the mean of 56 Missouri insanity acquittals, the rate drops to 4,066, which still placed Missouri as having the highest rate among the 25 reporting states.

It is interesting to note that the states with the five highest insanity acquittal rates, Missouri, Maine, Ohio, Delaware, and Wisconsin, all place the burden of proof on the defense to support insanity, at least according to a 1990 accounting.[13] This is not expected, given that previous studies have found that switching the burden of proof from the state to the defense resulted in a decrease in the number of insanity pleas and acquittals.[13] When comparing the responsibility tests, four of the five states employed the American Law Institute (ALI) test or a modification thereof, while one used the McNaughten test. The American Law Institute (ALI) test is broader than the McNaughten test and, theoretically at least, should result in more insanity acquittals. While these results provide some support for this expectation, other studies have found that restricting the responsibility test did not reduce the number of insanity acquittals.[15]

These results provide mixed support for the expectation that Missouri's restrictive insanity acquittal and release system would result in limited numbers of insanity acquittals. The number is low in absolute figures and in comparison with arrests. However, Missouri has one of the highest number of annual insanity acquittals relative to other states. The decline in the number of insanity acquittals over the last five years coincides with more re-

strictive release criteria and a narrowing of the insanity test, which provides some support to the expectation that the design changes would decrease the number of insanity acquittals. However, this conclusion is highly speculative given the current data available.

Several possible reasons exist as to why the expectation was not fully met that Missouri's restrictive insanity plea and release process would result in a low number of insanity acquittals. The assumption underlying this expectation is that defense attorneys fully understand the potentially restrictive ramifications of an insanity acquittal and, further, that they communicate this information to their clients. Elliott *et al.*[19] found that neither of these conditions always occurred. Also, the author has heard anecdotal reports of defense attorneys who, without full knowledge of Missouri's NGRI release process, inappropriately assured their clients they would be released from hospitalization in six months or less, which rarely happens. Next, evidence exists that some defense attorneys adopt paternalistic approaches with their clients. Those holding this position believe insanity acquittals are better for their mentally ill clients than going to jail or prison even if acquittal results in automatic hospitalization and indefinite commitment.[20, 21] Finally, insanity acquittee systems that emphasize public safety may actually increase the number of insanity acquittals because they provide high levels of assurance to judges and prosecutors that insanity acquittees will be hospitalized and monitored in the community upon release.[13]

Residential Settings of Insanity Acquittees

To maximize public safety considerations, it is expected that Missouri's insanity acquittee system would use hospitalization as the primary residential option for insanity acquittees, in contrast to the range of residential settings that may be available to persons with mental illnesses residing in the community. Several aspects of the design of Missouri's insanity acquittee system can impact the residential status of insanity acquittees. These include the automatic hospitalization of almost all insanity acquittees at the time of acquittal, restrictive criteria for release from hospitalization, and the involvement of multiple parties, including prosecutors and judges, in the release decision.

Mesritz[22] contends that public safety considerations are the primary reason for automatic hospitalization following insanity acquittal. Automatic commitment without a hearing maximizes public safety by always removing insanity acquittees from the community. However, this occurs at the cost of hospitalizing some insanity acquittees who may not be in need of inpatient treatment at the time of acquittal. In a 1988 survey of state statutes, 10 states, including Missouri, mandated that insanity acquittees automatically be committed to an inpatient facility without a hearing.[9] A 1994 legislative change in Missouri now allows a defendant charged with a minor offense to petition the court for an immediate conditional release at the time of acquittal, although anecdotal evidence suggests that courts rarely use this option.

Once hospitalized, several features of Missouri's system seek to limit release into the community. The burden of proof in the release process is placed on insanity acquittees to demonstrate by clear and convincing evidence they no longer are dangerous. Missouri also applies more stringent release requirements to insanity acquittees charged with dangerous offenses as their NGRI committing crimes. In addition, Missouri statute involves prosecutors and the courts in the release decision, which Weiner[23] contends is done to further protect public safety.

To assess the expectation that Missouri's system would use hospitalization as the primary housing option for insanity acquittees, categories of residential settings were totaled for the 797 insanity acquittees under the supervision of the Missouri Department of Mental Health on July 1, 1992. Among this group, 434 insanity acquittees (54%) were residing in inpatient psychiatric hospitals. Among Missouri's 363 insanity acquittees residing in the community on the survey date, 58.7 percent were living in a variety of supervised residential settings. Table 1 lists the percentage of insanity acquittees residing at various residential settings, which are presented from the most independent to the most restrictive settings.

The number of insanity acquittees hospitalized in Missouri is large compared with other states. According to the most recent comparative information across the 50 states, 317 insanity acquittees were residing in Missouri's inpatient facilities in 1986, which ranked Missouri third behind California ($N = 860$) and New York ($N = 450$), even though Missouri ranked only 15th in state population in 1986.[24]

Table 1
Residential Settings of Missouri Insanity Acquittees, July 1, 1992

Residential Setting	*N*	%
Independent living	150	18.8
Supervised apartments	50	6.3
Living with relatives	18	2.3
Group homes	55	6.9
Residential care facilities	75	9.4
Nursing homes, skilled and intermediate care	13	1.6
Inpatient, with current conditional release	13	1.6
Inpatient, open wards	137	17.2
Inpatient, locked wards with pass eligibility	209	26.2
Inpatient, maximum security	75	9.4
Department of Corrections	2	0.3
Totals	797	100

While the actual number of insanity acquittees hospitalized in Missouri is high, almost half of the insanity acquittees in Missouri's system on July 1, 1992 were residing in the community. As an indicator of extensive use of hospitalization, the percentage of insanity acquittees hospitalized is more difficult to interpret than actual numbers because of the lack of comparative data. Comparative data on insanity acquittees hospitalized versus those placed into the community could only be found from Oregon's insanity acquittee system.[25] However, system differences makes comparison across the two states tenuous.

The Oregon study included 758 insanity acquittees committed to the jurisdiction of the state's insanity acquittee system between 1978 and 1986.[25] The study

found that 50 percent of the insanity acquittees had never received a conditional release into the community by the end of the study period. Included in this group were some who were released from hospitalization into the community without a conditional release either because their maximum insanity sentence had expired or because they were found to no longer have a mental disease or defect. On the basis of the 50 percent never conditionally released and other reformulations of the data, Bloom and Williams[25] concluded the Oregon's system has a "heavy reliance on the forensic hospital." In contrast to Oregon's 50 percent who were never granted a conditional release, 36 percent of the insanity acquittees in Missouri had never been granted a conditional release by the survey date. An additional 18 percent of Missouri insanity acquittees were hospitalized on the survey date because of the loss of their conditional releases.

These results support the expectation that Missouri's insanity acquittee system would use extensive inpatient hospitalization as a residential placement for its insanity acquittee population. First, Missouri has one of the highest inpatient insanity acquittee populations in the United States. In addition, 54 percent of its 797 insanity acquittees were hospitalized on the survey date, July 1, 1992, and among all insanity acquittees, 36 percent had never received conditional releases. Researchers studying Oregon's system concluded that similar percentages in their system constituted extensive use of inpatient hospitalization.

One can speculate that at least three factors may inhibit greater use of hospitalization of insanity acquittees above the 54 percent in Missouri on July 1, 1992. First, Missouri has an extensive conditional release and community monitoring system, which gives some assurance to prosecuting attorneys and circuit court judges that insanity acquittees they release will not present a threat to public safety. Second, Missouri has restrictive criteria for unconditional release, which frees insanity acquittees from mandatory supervision by the mental health and criminal justice systems. While Missouri has approximately 55 new insanity acquittees entering the system each year, the forensic director has calculated that the courts have granted an average of only nine unconditional releases each year between 1986 and 1993. Most insanity acquittees do not meet the restrictive unconditional release criteria, even though they have received conditional releases, which helps to account for the high numbers of insanity acquittees living in the community. Third, the majority of insanity acquittees were conditionally released to supervised community settings, which gives additional assurance that public safety will be maintained.

Psychiatric Diagnoses

It is expected that most insanity acquittees in Missouri's insanity acquittee system would have primary psychiatric diagnoses depicting severe mental illnesses. First, Missouri's insanity acquittee statute excludes three conditions that do not reflect severe mental illness, those being alcoholism or drug abuse without psychosis, repeated acts of criminal or antisocial

Table 2
Primary Psychiatric Diagnoses of Missouri Insanity Acquittees, July 1, 1992

Primary Diagnosis	% (*N*)
Schizophrenia	60
Bipolar disorders	16
Organic disorders	4
Substance use/abuse	4
Mental retardation	2
Personality disorders	1
Other disorders	13
Total	100 (797)

conduct, and criminal sexual psychopathy. Second, Missouri statute places the burden of proof on defendants in the insanity plea process. Steadman *et al.*[13] found that when Georgia and New York switched the burden of proof from the state to defendants, the percentage of insanity acquittees with major mental illnesses significantly increased, with over 90 percent of insanity acquittees having such diagnoses.

To assess this expectation, the primary diagnosis of each insanity acquittee in Missouri's system on July 1, 1992, was tabulated. Among this group, 78 percent had severe mental illnesses consisting of either schizophrenia, schizoaffective disorder, bipolar disorder, or other psychotic disorders. Table 2 lists primary diagnoses for this group.

The percentage of Missouri insanity acquittees with severe mental illnesses (78%) is consistent with other states that place the burden of proof on defendants in the insanity plea process. Insanity acquittees with the same types of severe mental illnesses constituted 82 percent of 137 Illinois insanity acquittees,[26] 64 percent of 313 insanity acquittees from Connecticut,[27] and 72 percent of 697 Oregon insanity acquittees.[25]

However, when comparing these percentages with those in states that place the burden of proof on the state to demonstrate that defendants seeking an insanity acquittal are sane, little difference existed in the percentage of insanity acquittees with severe mental illnesses. In a study of 36 Colorado insanity acquittees, 71 percent had severe mental illnesses,[28] and in Oklahoma, 74 percent of 61 insanity acquittees had severe mental illnesses.[29] In addition, Steadman *et al.*[13] found that 60 percent of a sample of insanity acquittees adjudicated in the two-year period before Georgia changed its burden of proof from the state to the defendant had severe mental illnesses, and that 82 percent of a sample from New York also had severe mental illnesses prior to the state's statutory change. However, when the burden of proof changed to the defendants in Georgia and New York, the percentage of insanity acquittees with severe mental illnesses escalated to 90 percent and 97 percent, respectively. In both cases, these percentages were well above those in the four states previously described that placed the burden of proof on defendants in the insanity plea process.

Even though the vast majority of Missouri insanity acquittees had severe mental illnesses, the percentage of insanity acquittees with severe mental illnesses did not reach the levels found in the two states included in the Steadman *et al.*[13] study that changed the party bearing the

burden of proof in the insanity plea process. Based upon the results of that study, it was anticipated that 90 percent or more of the insanity acquittees would have severe mental illnesses among states that place the burden of proof on defendants. In Missouri, 78 percent of insanity acquittees had similar serious illnesses, somewhat below the expected level. In addition, differences in percentages of insanity acquittees with severe mental illnesses did not vary across states, based on the party bearing the burden on proof, providing further support that that placing the burden of proof on defendant does not necessarily lead to the high levels of pleading serious mental illness that Steadman *et al.*[13] found following the change in burden of proof.

It should be noted that the focus on primary diagnoses fails to capture the clinical diversity of Missouri insanity acquittees. While Missouri statute prohibits substance abuse without psychosis and repeated antisocial behaviors from qualifying for the insanity defense, these conditions existed as secondary diagnosis in substantial proportions. Among the 797 Missouri insanity acquittees, 49 percent carried a substance abuse diagnosis, 23 percent an antisocial personality disorder diagnosis, and 21 percent other personality disorder diagnoses. Only two of the states previous referenced presented secondary diagnoses of substance abuse. Oregon reported that 27 percent of its sample of insanity acquittees carried some type of substance abuse diagnosis,[25] and Colorado reported that among its sample of 36 insanity acquittees, 47 percent had a drug abuse history and 50 percent had a prior history of alcohol abuse.[28] The high rate of substance abuse diagnoses among Missouri insanity acquittees may be reflective of persons with mental illnesses residing in the community. In an unpublished survey of a sample of community clients receiving services from the Missouri Department of Mental Health, 49 percent reported some problems with alcohol use and 14 percent with drug use. The study also examined substance abuse among clients admitted to Missouri's acute public psychiatric hospitals. Among this group, 63 percent reported some problems with alcohol use and 45 percent with drug use.

The rate of personality disorders among Missouri insanity acquittees appears to be high, with 23 percent having a diagnosis of antisocial personality disorder and 21 percent other personality disorders. Unfortunately, none of the comparative states reported on secondary diagnoses of personality disorders. Again comparing Missouri insanity acquittees with clients served by the Missouri Department of Mental Health, personality disorders were less prominent in acute-care and community-based clients. In the above-referenced survey, acute clients had rates of antisocial personality disorder and other personality disorders of 7 percent and 12 percent, respectively. Community-based clients receiving intensive support services had rates of antisocial personality disorder and other personality disorders of 2 percent and 13 percent, respectively, while other community-based clients had rates of 0 percent and 13 percent, respectively. The rate of antisocial personality disorder

among Missouri's insanity acquittee population is more reflective of that found among the criminal population. For example, Teplin[30] found that 48 percent of a sample of persons arrested and detained in an urban jail were diagnosed with antisocial personality disorder. Beyond the comparison of insanity acquittees with other persons entering the criminal justice system, the author cannot speculate as to the reasons for the seemingly high rates of personality disorders among Missouri insanity acquittees.

Severity of NGRI Committing Crime

Considerable variation exists between states in the percentage of insanity acquittees who committed serious offenses as their NGRI committing crimes.[31] To account for this variation, in part, it is expected that the crimes for which Missouri courts acquit defendants as NGRI will usually be severe because of the highly restrictive commitment and release procedures of Missouri's insanity acquittee system. Defendants charged with lesser offenses must weigh the option of receiving probation or short prison stays against automatic commitment to an inpatient hospital and potential indefinite inpatient or community supervision.

In examining the classes of Missouri criminal offenses among insanity acquittees in Missouri on July 1, 1992, 23 percent committed class A felonies, the most serious criminal acts; 36 percent committed class B felonies; 25 percent committed class C felonies; 9 percent committed class D felonies; and 7 percent committed misdemeanor offenses. Reclassifying the data, 74 percent of the NGRI committing offenses were crimes against person, although 40 percent of the crimes against persons did not fall into the two most serious crime classes. Also, 49 percent of insanity acquittees committed one of seven major crimes that statutorily required additional testimony requirements for release. The largest categories of crimes committed by insanity acquittees included assault, 25 percent; murder, 16 percent; sexual assault, including rape, 11 percent; and burglary, 11 percent. Table 3 includes a complete listing of the NGRI committing offenses among Missouri insanity acquittees.

Table 3
Most Serious NGRI Committing Offense of Missouri Insanity Acquittees, July 1, 1992

Criminal Charge	% (*N*)
Assault	25
Murder	16
Sexual assault (including rape)	11
Burglary	11
Robbery	8
Stealing	7
Arson	6
Weapons charges	5
Auto theft	3
Kidnapping	2
Property damage	1
Drug offenses	1
Driving offenses	1
Manslaughter	1
Harassment	<1
Resisting arrest	<1
Trespassing	<1
Other	<2
Total %	100 (797)

In comparing the severity of NGRI committing crimes across states, consid-

Table 4
NGRI Committing Offenses by State System Design

Criminal Charge	Percentage by State (*N*)						
	MO[a]	HI[b]	OK[b]	MI[b]	IL[c]	CT[c]	OR[c]
Murder	16	24	23	30	27	23	3
Assault	25	9	35	31	37	33	16
Robbery	8	14	8	9	3	10	6
Sexual assault	11	2	7	6	3	10	7
Kidnapping	2	0	0	1	1	2	2
Arson	6	0	8	4	7	8	7
Other	32	51	19	19	22	14	59
Total %	100	100	100	100	100	100	100
	(797)	(107)	(61)	(223)	(137)	(313)	(758)

[a] Automatically hospitalizes at time of acquittal for serious offenders and indefinitely commits.
[b] Assesses need for hospitalization at time of acquittal and indefinitely commits.
[c] Assesses need for hospitalization at time of acquittal and limits lengths of hospitalization.

erable variation exists that cannot be explained as a function of key components of system design. Comparison were made between three types of systems that varied in the degree of restrictiveness in their commitment and release procedures. At the most restrictive level was Missouri, which required automatic hospitalization for all insanity acquittees and permitted indefinite commitment. (While Missouri passed an amendment in 1994 to permit conditional releases for minor offenses at the time of acquittal, the data on severity of committing crime were collected prior to the statutory change.) At the second level were states that allowed for an examination of the need for inpatient hospitalization at the time of acquittal, but employed indefinite commitment. These states included Hawaii,[32] Oklahoma,[29] and Michigan.[33] At the lowest level of restrictiveness were states that evaluated the need for inpatient hospitalization at the time of acquittal and set limit limitations on lengths of commitment. States fitting this system design were Illinois,[26] Connecticut,[27] and Oregon.[25] Table 4 provides a summary of the percentage of NGRI committing crimes found among insanity acquittees from the seven states.

The results do not support the expectation that more of Missouri insanity acquittees would have committed serious offenses as a function of Missouri's restrictive system design. As indicated in Table 4, the severity of NGRI committing crimes did not vary as a function of the commitment and release components of the states' insanity acquittee systems. For example, while Oregon's murder rate of 3 percent was consistent with an expected level given its due process protections, the other two states with the same two system design components, Illinois and Connecticut, had murder rates of 27 percent and 23 percent, respectively. These were similar to rates from the three states with the second level of restrictiveness in their system design. Missouri, which had the most restrictive design of the seven states, had a murder rate of 16 percent, which was in the middle of the percent-

ages that ranged from 3 percent to 30 percent. In addition, a comparison of percentages in the "other" crime category, the least severe crimes, also displayed an inconsistency that cannot be explained by system components.

These results suggest that factors other than automatic hospitalization and indefinite commitment account for the variation in the severity of the NGRI committing offenses for defendants granted insanity acquittals. One possible intervening factor is whether states had a death penalty. LaFond and Durham[8] argue that only those defendants charged with the most serious crimes with risk of the death penalty or long imprisonments would accept automatic hospitalization and indefinite commitment to a psychiatric hospital as NGRI. Of the seven states in the comparison of severity of committing crimes, two states do not have the death penalty, Hawaii and Michigan.[34] However, their rates of insanity acquittees acquitted for murder overall were higher than those states without the death penalty, which was the opposite of what LaFond and Durham predicted.

Lengths of Hospitalization

It is expected that in Missouri's insanity acquittee system, which places public safety ahead of insanity acquittees' treatment needs and due process rights, insanity acquittees who committed more serious crimes would be hospitalized for greater lengths of time. This outcome is expected for at least four reasons. First, Missouri's insanity acquittee statute mandates that courts consider severity of the NGRI committing crime as one factor when making release decisions and requires higher standards for the release of insanity acquittees who committed dangerous felonies. Second, Missouri Department of Mental Health internal policies and procedures governing the release of insanity acquittees also include the severity of committing crimes as an important factor in release decisions.[5] Third, in at least two instances, family members expressed outrage at the perceived early release of the insanity acquittees who murdered their daughters. Their lobbying efforts in response to these incidents led to statutory changes in 1991 and 1996 to tighten release procedures.[35, 36] Finally, in a review of the insanity acquittee literature, Steadman[31] consistently found that insanity acquittees who committed more serious crimes were hospitalized for greater lengths of time.

To examine this expectation, lengths of hospitalization were analyzed for two groups of insanity acquittees who were in Missouri's system on July 1, 1992. The first analysis examined lengths of hospitalization of insanity acquittees who received court-ordered conditional releases to reside in the community. Time was measured from the date of the insanity acquittal to the date released from the hospital with the first conditional release. The second analysis examined lengths of hospitalization of insanity acquittees who never have been granted conditional releases. Including only the first group ignores the ability of Missouri's system to indefinitely hospitalize insanity acquittees. Time was measured for this second group from the date of insanity acquittal to the end of the study period. As a cross-

Table 5
Mean and Median Months of Hospitalization of Conditionally Released Missouri Insanity Acquittees by Class of Crime, July 1, 1992 (N = 509)

Class of Crime	Mean Months*	Standard Deviation	Median Months	Percentage of Total
Class A Felonies	75.3	(61.8)	64	21.8
Class B Felonies	52.8	(57.8)	32	35.0
Class C Felonies	38.9	(45.7)	26	26.1
Class D Felonies	24.1	(26.3)	15	9.4
Misdemeanors	28.3	(31.6)	24	7.7
Totals	49.5	(54.3)	30	100.0

* F = 13.90, df = 508, p = .0000; missing data on two subjects.

sectional survey, this method could potentially include insanity acquittees who were found NGRI just prior to the July 1, 1992, survey date.

As found in Table 5, a comparison of the mean and median lengths of hospitalization of conditionally released insanity acquittees indicates that, on average, insanity acquittees who committed more serious crimes were hospitalized for greater lengths of time, which is consistent with expectations. Lengths of hospitalization increased as the severity of the NGRI committing crimes increased among the conditionally released group. This held for each of the first four crime classes. Lengths of hospitalization for misdemeanors were slightly higher, with mean lengths being similar to class D felonies and median lengths similar to class C felonies.

Among Missouri's never conditionally released insanity acquittees, lengths of hospitalization followed a different pattern, as indicated in Table 6. Unlike conditionally released insanity acquittees, the mean and median lengths of hospitalization among never conditionally released insanity acquittees corresponded to severity of crime only for insanity acquittees

Table 6
Mean and Median Months of Hospitalization of Never Conditionally Released Missouri Insanity Acquittees by Class of Crime, July 1, 1992 (N = 286)

Class of Crime	Mean Months*	Standard Deviation	Median Months	Percentage of Total
Class A Felonies	92.3	(89.0)	57	26.6
Class B Felonies	57.7	(58.2)	38	39.5
Class C Felonies	63.2	(57.9)	48	22.7
Class D Felonies	66.2	(70.2)	47	6.6
Misdemeanors	59.5	(59.3)	40	4.6
Totals	68.8	(69.5)	43	100.0

* F = 3.15, df = 285, p = .015.

who committed class A felonies, the most severe grouping of crimes. These insanity acquittees were hospitalized for a mean of 92.3 months. Among the other four crime categories, mean hospitalization lengths varied from 57.7 months to 66.2 months, including misdemeanors.

One possible explanation for the variable impact of crime severity on lengths of hospitalization of conditionally released versus never conditionally released Missouri insanity acquittees is that crime severity may only become a factor for consideration in release decisions when insanity acquittees' psychiatric conditions have stabilized to the point that treatment staff can consider them for release. In addition, high standard deviations of mean lengths of hospitalization among conditionally released insanity acquittees indicate that, while on average lengths of hospitalization corresponded to severity of crimes, wide variation existed in the hospitalization lengths within each category of crime, including class A felonies. This suggests that crime severity is only one factor that the Missouri insanity acquittee system considers when releasing insanity acquittees from inpatient hospitalization, which is consistent with Missouri statute. However, recent case law in Missouri supports the position that severity of the NGRI committing crime and length of hospitalization will be considered as courts determine whether the insanity acquittee residing in a psychiatric hospital has met the statutory burden for release.[37]

Also noteworthy when considering system design and lengths of hospitalization is the use of indefinite hospitalization in the Missouri insanity acquittee system. Among the 509 conditionally released insanity acquittees, 28 percent were hospitalized for 60 months or longer, and 9 percent were hospitalized 120 months or longer prior to their first conditional release. In contrast, among the 286 insanity acquittees who were never granted a conditional release by the survey date, 40 percent were hospitalized 60 months or more, and 22 percent were hospitalized 120 months or more.

To further explore the impact of system design on insanity acquittees' lengths of hospitalization, comparisons were made of the median lengths of hospitalization for Missouri insanity acquittees and those from three other states. Data reported by Steadman *et al.*[13] for New York, California, and Georgia were selected for comparison for two reasons. First, they used the same groupings of crimes and consistently provided median lengths of hospitalization. Median lengths of hospitalization of Missouri insanity acquittees were calculated using the same method as Steadman *et al.*[13] Second, the states varied in their system design. Missouri used criteria for release that were more stringent than civil commitment and allowed indefinite commitment of insanity acquittees. New York also used more restrictive release criteria and allowed indefinite commitment. California used criteria for release that were more stringent than civil commitment but limited lengths of hospitalization to the length of imprisonment had the defendant been found guilty. Finally, Georgia allowed indefinite commitment but used civil commitment cri-

Table 7
Median Years of Hospitalization by Crime Category and by State

Criminal Charge	State			
	MO	NY	CA	GA
Murder	6.9	6.4	6.0	3.0
Other violent crimes[a]	5.0	5.2	3.5	0.7
Other crimes[b]	2.9	2.8	2.6	0.8

[a] Includes assault, sexual offenses, and kidnapping.
[b] Includes all other crimes not found in the first two categories.

teria for release. Table 7 provides the results.

The lengths of hospitalization were similar in Missouri, New York, and California across the three crime categories, with more severe crimes being associated with greater median periods of hospitalization. However, the median length of hospitalization of insanity acquittees from Georgia who committed murder was less than half of that found in the other three states. In addition, the lengths of hospitalization of insanity acquittees from Georgia of the two less severe crime categories were about the same, which were both less than one year. Georgia is the only one of the four states that used civil commit criteria as the basis for release, while the other three states used commitment criteria that were boarder and more likely to result in the continued hospitalization of insanity acquittees.

These analyses only partially support the expectation that lengths of hospitalization would be greater for crimes of increased severity. One consistent finding was that insanity acquittees who were released under civil commitment standards were hospitalized for considerably shorter periods than states that used more restrictive release criteria. A second finding, consistent across the four states examined, was that insanity acquittees who committed the most serious crimes were hospitalized the longest. Differences in system design cannot account for the lack of variation in lengths of hospitalization among all of the less severe crime groupings. Among conditionally released Missouri insanity acquittees and insanity acquittees from California and New York, median lengths of hospitalization clearly progressed as crime severity increased. However, among Georgia's insanity acquittees and never-released Missouri insanity acquittees, lengths of hospitalization did not vary among crime categories beyond the most severe grouping of crimes.

Occupancy of Long-Term Psychiatric Beds by Insanity Acquittees

At least two factors led to an expectation that insanity acquittees would occupy a significant percentage of available long-term psychiatric beds in Missouri. First, extensive use of inpatient hospitalization is a key design feature of insanity acquittee systems that emphasize public safety. As already noted, 54 percent of insanity acquittees in Missouri's system on July 1, 1992, were hospitalized. Second, as a result of the mandatory treatment of insanity acquittees, forensic and nonforensic psychiatric patients must compete for a decreasing number of psychiatric hospital beds. Between 1970 and 1988, the actual number of inpatient beds operated by state and county mental hospitals declined nationwide from 413,066 in 1970

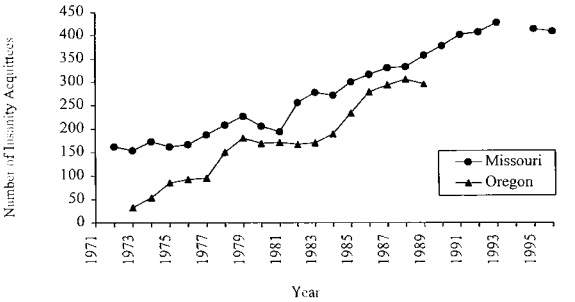

Figure 2. Number of insanity acquittees residing in inpatient psychiatric hospitals in Missouri and Oregon by year.

to 107,109 in 1988, a 74 percent reduction.[38] Consistent with this nationwide trend, the Missouri Department of Mental Health has also decreased the number of long-term psychiatric hospital beds. For example, in 1981, the Missouri Department of Mental Health operated 2,250 long-term inpatient beds, which decreased to fewer than 900 beds in 1996.

The occupancy rate of insanity acquittees is a function of both the number of available psychiatric beds and the number of insanity acquittees hospitalized. At the same time the number of long-term beds was decreasing in Missouri, the number of insanity acquittees hospitalized in that state was consistently rising. For example, at the end of the 1981 fiscal year, 195 insanity acquittees were hospitalized. On the same date in 1996, the number increased to 410. As a result of a decreasing number of beds and an increase in the number of hospitalized insanity acquittees, Missouri insanity acquittees occupied 9 percent of Missouri's long-term inpatient psychiatric beds in 1981, 22 percent in 1987, and 42 percent in 1993. Excluding a small number of maximum security beds designated for use by inmates of the Missouri Department of Corrections, 51 percent of patients residing in the Missouri Department of Mental Health long-term psychiatric beds on July 1, 1996, were insanity acquittees.

The only state that has published longitudinal data on the number of insanity acquittees hospitalized is Oregon.[25] Figure 2 graphs the number of insanity acquittees hospitalized on single dates in Missouri and Oregon for the years data were available.

Figure 2 reveals that the number of insanity acquittees hospitalized in Missouri and Oregon has steadily increased in a similar pattern. This increase has occurred despite differences in some system components. The two states' insanity acquittee systems are similar in that each has an extensive conditional release component. However, while Oregon judges have always had the ability to grant releases into the community following insanity acquittals, and they have exercised that option,[25] Missouri judges received that option only in 1994, and anecdotal evidence suggests it is rarely used. Another significant difference is that Oregon

judges impose an insanity sentence that sets a time limitation on lengths of hospitalization and community supervision, while commitment in Missouri is indefinite.

The comparison between the Missouri and Oregon systems suggests that high numbers of inpatient insanity acquittees can result from different types of system designs. Increased numbers of insanity acquittees were found in both states, even though Oregon's system had a stronger orientation toward the due process rights and treatment need of insanity acquittees by granting more releases at the time of acquittal and assigning time limits to commitment through insanity sentences.

While linking the increase in hospitalization usage to system design features was not supported, the impact of insanity acquittees on psychiatric bed capacity has been similar in both Oregon and Missouri. As previously stated, insanity acquittees hold approximately 50 percent of the beds in Missouri's long-term public inpatient psychiatric hospitals, which has affected the administration and treatment in these facilities.[39] Although research on the Oregon system did not provide an occupancy rate useful for comparison, Bloom and Williams[25] indicated that Oregon's Mental Health and Developmental Disabilities Services Division has had to open new hospital wards to accommodate the increased number of inpatient insanity acquittees. In addition, they concluded that the steadily increasing number of insanity acquittees and the corresponding high costs of inpatient hospitalization are threatening their innovative insanity acquittee system.

Conclusions

Missouri insanity acquittees retain noteworthy characteristics. Missouri has one of the highest numbers and rates of insanity acquittees in the United States, although the number has decreased in the last five years. The majority of insanity acquittees were residing in Missouri Department of Mental Health long-term inpatient psychiatric hospitals. Among those living in the community, over half were found in supervised living settings. Severe mental illnesses were prominent, being found in 78 percent of insanity acquittees. Overall, NGRI committing crimes were severe, 59 percent being found in the two most serious Missouri crime classes and 74 percent being crimes against person. Mean lengths of hospitalization were extensive, 49.5 months among conditionally released insanity acquittees and 68.8 months among the never released group. Mean months of hospitalization varied according to severity of the committing crime among the conditionally released group, but not in the never released group, except among those insanity acquittees who committed crimes in the most severe crime class. Finally, as a result of a decrease in the number of Missouri Department of Mental Health long-term inpatient psychiatric beds and an increase in the number of hospitalized insanity acquittees, insanity acquittees now constitute over 50 percent of the psychiatric patients served in Missouri's long-term psychiatric facilities.

An attempt was made to link the characteristics of Missouri insanity acquittees to the design of its insanity acquittees

system, which places public safety as its primary legislative goal relative to the treatment needs and due process rights of insanity acquittees. In most cases, support did not exist to link characteristics with the state's system design. The number and rate of insanity acquittals was higher than expected in Missouri's restrictive insanity plea, commitment, and release system, although recent system changes may be having an impact in the manner intended in the directing legislation. While most insanity acquittees had severe mental illnesses, no linkage could be found between system design and the prevalence of severe mental illnesses. Likewise, no linkage was found between system design and severity of the NGRI committing crimes. While insanity acquittees who committed the most severe crimes were hospitalized for greater lengths of time, the use of civil commitment standards in release decisions in one state appeared to lead to shorter periods of hospitalization. Finally, the linkage between system design and the occupancy of inpatient hospital beds by insanity acquittees was not established.

These findings highlight the need for additional research on the impact of policy design on policy outcomes that cuts across different state systems and occurs over time. At least three possible explanations exist for the Missouri findings that can direct future research. First, it is possible that the analysis did not contain components or combinations of insanity acquittee system components that are actually responsible for insanity acquittee characteristics. Research is needed to develop a means of classifying insanity acquittees systems to allow for more comprehensive analyses of system impact. Second, modifications of legislative intent during policy implementation, rather than system design changes, may account for some of the variance in insanity acquittee characteristics. Based upon the author's observations of variations in policy implementation across jurisdictions in Missouri, implementation evaluation offers a complementary strategy for evaluating policy outcomes in addition to the focus on insanity acquittee system designs. Finally, further research is needed to explore the extent to which legislative changes of insanity acquittee statutes may constitute "symbolic politics."[40] Rather than attempting to impact the characteristics of its insanity acquittee population, the passage of insanity acquittee legislation may exist to generate publicity for legislators, to affirm their "tough-on-crime" stances, or to provide evidence to the public that they are safe from these mentally ill offenders, regardless of whether the handling of this group constitutes a genuine public safety threat relative to other public policy issues.[41, 42]

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