Nonemergent Forcible Medication in an Acute Hospital

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Nonemergent forcible medication is a controversial procedure that has received somewhat less study in acute hospitals and in states where a simple in-house "treatment-driven" clinical review procedure is followed. We reviewed the charts of all patients so medicated by the New Jersey "Rennie" process on a large general acute adult psychiatric service, finding 43 (3%) of 1420 admitted patients so treated. Compared with a population of next-admitted individuals, these "Rennie" patients more frequently had previously required extended emergent forcible medication, had significantly longer hospitalizations (70 versus 26 days), not accounted for by the duration of treatment refusal, but improved with treatment so that almost all were discharged directly back to the community. Rennie patients appeared more likely to be diagnosed with schizophrenia and were significantly more likely to have a known history of assault, threatened assault, or property damage, but significantly less likely to have a known history of suicide threat or attempt. They were also significantly less likely to have a principal or secondary diagnosis of personality disorder or substance use disorder.

Once taken for granted as an institutional prerogative, nonemergent forcible medication of involuntary psychiatric patients has been legally controversial ever since the 1975 temporary restraining order and subsequent 1979 landmark Massachusetts decision of *Rogers v. Okin.*[1] Concerns regarding patient civil liberties and adverse reactions such as tardive dyskinesia have weighed heavily in judicial decisions expanding patients' rights to refuse psychotropic medication in several states. Apart from relatively noncontroversial emergencies, forcible medication of psychiatric patients now usually requires involuntary status and a review process. In some states this is a judicial review and in others a clinical-administrative procedure, with several further variations in details.[2] Although psychiatrists have expressed appropriate concern about untreated patients "rotting with their rights on,"[3] and some jurists' concerns may stem from overestimating potential medication adverse reactions,[4] it is also true that extant poor practices in state facilities inspired such judicial remedies.[5]

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While the medical and legal professions continue to gain practical experience with these solutions, predominantly in long-term facilities, there has been relatively little study of the characteristics of patients selected for nonemergent forcible medication in acute community hospitals. Continuing legal concern about the appropriateness of nonemergent forcible medication would be most understandable in those states, such as ours (New Jersey), in which there is no routine judicial involvement or extra-institutional independent psychiatric review in the approval process. However, there has also been little research in such states.

We hypothesized that patients selected for nonemergent forcible medication in an acute general hospital would be more disturbed in terms of various dangerous behaviors, need for significant previous emergent medication, and length of stay. On the basis of others' work with differing but related populations, we also hypothesized that they might be older.[6–8] In view of conflicting reports that treatment refusers might be more frequently diagnosed with schizophrenia,[7,9,10] or with bipolar disorder and/or schizoaffective disorder,[8,11,12] we undertook to study all Axis I and Axis II diagnoses in our patients.

Methodology

New Jersey employs a clinical-administrative review procedure for nonemergent forcible medication of involuntary adults, pursuant to the *Rennie v. Klein* decision.[13] The institution's medical director serves as final arbiter, determining whether the medication "is a necessary part of the patient's treatment plan"; the final Rennie court ruling eliminated any requirement for an outside independent psychiatric review. We retrospectively surveyed charts of all such patients nonemergently forcibly medicated during 1990 (hereinafter called "Rennie" patients), in a general county hospital with a large psychiatric inpatient service. In that year, the hospital served a suburban, predominantly middle-class Caucasian community of approximately 900,000, had the only involuntary psychiatric beds in the county, and transferred less than two percent of its admissions to the state hospital.

We selected a comparison population by matching cases with the next-admitted acute adult psychiatric patient who did not undergo the Rennie procedure. We chose this strategy after noting some chronological clustering of Rennie approvals, possibly related to cohort effects of new psychiatrists becoming familiar with this procedure, seasonal effects, crowding effects, or other unknown factors. We did not match on admission commitment status or discharge diagnosis, instead seeking a comparison with "typical" acute psychiatric inpatients. We excluded admissions to a small forensic unit, and patients forcibly medicated by special court order (several patients previously found "not guilty by reason of insanity"). The hospital had 1,420 admissions to the remaining acute adult psychiatric units in 1990; 51 percent of these were involuntary admissions. We reviewed charts for demographic data (age, ethnicity, gender,

marital status, religion), for commitment status at the time of admission, for DSM-III-R discharge diagnoses, and for known history of threatened or attempted suicide or assault, or property damage. We used Systat Macintosh version 5.1 for statistical analyses. All Fisher's exact and *t*-tests were two-tailed; all *t*-tests used independent measures.

Results

There were 43 such patients forcibly medicated by the Rennie procedure; representing 3.0 percent of admissions to the units studied. Four other Rennie applications were rejected by the medical director, resulting in a 91-percent approval rate for the units studied. Approved patients spent an average of 19.0 days as inpatients before Rennie medication authorization, receiving an average of 2.5 doses of medication intramuscularly before taking medication orally (20 received no injections, electing to take all doses orally once the Rennie decision was announced). Forty of the 43 entered the hospital involuntarily; the other three signed in voluntarily but required subsequent commitment. Twenty-five of the control group were also initially involuntarily admitted, significantly fewer than the Rennie group ($p < .001$, Fisher's exact); we had expected to find treatment refusal and eventual need for nonemergent forcible medication more common in those admitted involuntarily. Rennie patients did not significantly differ from controls in age, marital status, ethnicity, or religion (see Table 1). Women comprised 63 percent of the Rennie group, as opposed to 37 percent of the controls ($p = .030$, Fisher's exact).

The findings most related to our research hypotheses appear in Table 2. The Rennie patients had a dramatically longer average length of stay (70.2 versus 26.2 days, $p < .001$), not simply accounted for by the time they remained unmedicated. This also appeared unrelated to the greater number of Rennie patients entering the hospital as involuntary patients. In our control population those admitted involuntarily had shorter stays than those admitted voluntarily (21.7 versus 32.5 days, $t = 1.44$, $p = .157$, NS). Three Rennie patients were discharged to the state hospital for further treatment, as well as one of the control patients; one Rennie patient was discharged to a geriatric intermediate level of care facility.

The Rennie patients showed a trend toward having a greater likelihood of known assaults, which reached statistical significance if threats of assault were included. This finding became even more robust when a known history of property damage was included, expanding the category into all externally directed aggression. The Rennie patients were significantly less likely than controls to have a known history of suicide threats or attempts, or attempts alone. Reasons given by attending psychiatrists in their Rennie applications stressed that the patient was severely psychotic (40 cases) and/or could not care for themselves (10 cases). Assaultiveness was given as a reason in eight cases, and intentional self-destructiveness in only one case.

In New Jersey, both voluntary and

Table 1
Demographic Characteristics of "Rennie" Patients and Controls

	Rennie	Controls	Statistic	p
n	43	43		
Age	42.1	37.0	$t = 1.624^a$	.108, NS
Sex			Fisher's exact	.030
Male	16	27		
Female	27	16		
Marital status				
Single	20	26		
Married	8	10		
Separated, divorced, or widowed	15	7		
Ethnicity				
Caucasian	39	36		
All others	4	7		
Religion				
Catholic	23	26		
Protestant	11	15		
Other or none	9	2		

[a] $df = 84$.

Table 2
Clinical Characteristics of "Rennie" Patients and Controls

	Rennie	Controls	Statistic	p
Length of stay	70.2	26.2	$t = 4.907^a$	<.001
Admitted involuntarily	40	25	Fisher's exact	<.001
Known assault	11	4	Fisher's exact	.086
Known assault or threat	22	9	Fisher's exact	.007
Known assault, threat, or property damage	26	10	Fisher's exact	.001
Known suicide attempt	3	11	Fisher's exact	.038
Known suicide attempt or threat	5	14	Fisher's exact	.036

[a] $df = 84$.

involuntary patients may receive extended forcible medication for up to three days in an emergency, and for an additional three days if approved by the medical director. Eight Rennie patients received such emergency forcible medication earlier during their hospitalization, continued noncompliance requiring the Rennie nonemergent procedure; no control patient received this emergency medication procedure ($p = .005$, Fisher's exact).

Principal discharge diagnoses were less subject to straightforward analysis, because of their diversity (Table 3). Twenty-four of the Rennie group received a diagnosis of schizophrenia compared with only nine of the controls, but related diagnoses were more evenly split (e.g., 2 versus 2 with psychotic disorder, NOS; 6 Rennie versus 7 controls with schizoaffective disorder). Eight in each group had bipolar disorder. More of the control group had major depression (6 versus 1), adjustment disorder (3 versus 0), and substance abuse (5 versus 0). Considering both principal and secondary diagnoses, only four of the Rennie patients had a diagnosed substance use disorder, versus 19 of the controls ($p <$

Table 3
Principal Discharge Diagnoses of "Rennie" Patients and Controls

Principal Diagnosis	Rennie	Controls
Schizophrenia and related		
Schizophrenia	24	9
Schizophreniform disorder	1	0
Delusional disorder	0	1
Organic delusional disorder	0	1
Psychotic disorder, NOS	2	2
Schizoaffective disorder	6	7
Mood disorders		
Bipolar disorder	8	8
Major depression	1	6
Organic mood disorder	1	1
Others		
Adjustment disorder	0	3
Substance use disorder	0	5
Totals	43	43

.001, Fisher's exact). Sixteen Rennie patients had a diagnosed paranoid subtype of schizophrenia or delusional disorder, versus eight of the controls ($p = .06$, Fisher's exact, NS). More of the control group received any principal or secondary Axis II diagnosis (8 versus 1; $p = .03$, Fisher's exact).

Most of the patients with diagnosed major depression were severely depressed, often with psychotic features, and one was medicated with the Rennie procedure. However, the control group patients with principal diagnoses of adjustment disorder or substance use disorder were certainly at less risk of being pushed to take medication they might find objectionable. We therefore did an additional analysis excluding the eight control group patients with these principal diagnoses, comparing the remaining 35 controls with the 43 Rennie patients. Despite some loss in statistical power from the smaller population, this analysis produced only modest changes in our results. The Rennie patients still had significantly longer hospitalizations (70.2 versus 27.4 days, $p < .001$), were still nonsignificantly older (42.1 versus 39.7 years, $p = .48$), more likely to initially have been committed ($p = .002$), and more often female, but now not significantly more often ($p = .068$). Findings related to dangerous behaviors were statistically weakened in this analysis, but did not disappear. Rennie patients were still significantly more likely to have a known history of assault, threatened assault, and/or property damage ($p = .006$), but there was only a trend for Rennie patients to less frequently have a known history of suicide threat or attempt ($p = .084$).

Discussion

Our results should be interpreted with appropriate caution, respecting the limitations imposed by study design. We employed a retrospective chart review, which, while minimizing certain biases, relied on available chart data, exhibiting varying degrees of comprehensiveness, and diagnostic and therapeutic abilities and practices associated with many different clinicians. Not employing a prospective experimental design, we can only report associations. Selecting any type of control population controls only certain variables, which cannot then be further studied (time of admission in our case); while unmatched variables (diagnosis, admission status, etc.) may be confounded in any significant findings.

We found that our forcibly medicated patients had significantly longer hospitalizations than controls. This supported

findings in several state psychiatric and forensic hospitals;[8, 9, 14] another study reported shorter stays.[11] However, all these other studies ended with many patients still hospitalized, reporting length of stay for only the discharged subgroups. One small New York study of a community mental health center associated hospital found a longer length of stay for forcibly treated refusers, but the difference was accounted for by the time spent unmedicated.[15] The longer length of stay of our Rennie patients did not indicate that medication was of little value; on the contrary over 90 percent were directly discharged to the community.

Although schizophrenia appeared to be a more common diagnosis in our Rennie patients, analysis was complicated by several factors, including the relatively frequent diagnosis of schizoaffective disorder, a nosological entity straddling schizophrenic and mood disorders, of unclear clinical validity and often idiosyncratically employed. Schizophrenia was found overrepresented in a small series of 18 New York state hospital court-petitioned treatment refusers, as well as in a much larger similar sample.[7, 9] On the other hand, two Minnesota state hospital studies found forcibly medicated treatment refusers more likely to be diagnosed with bipolar disorder or schizoaffective disorder than controls.[11, 16] Perhaps this difference may have been related to the Minnesota researchers' examining only discharged patients, thereby undercounting more chronically disabled, less dischargeable patients. Nonetheless, based on personal experience, we initially expected to find manic patients also overrepresented among those forcibly medicated, but this was not the case. Perhaps recent widespread use of benzodiazepines for acutely psychotic patients, medications manics find relatively acceptable, has ameliorated the pattern of medication refusal we had come to associate with them. The infrequent diagnosis of any personality disorder in our Rennie patients compared with the control group is consistent with their differences in Axis I principal diagnoses.[17]

Based on others' reported studies of medication refusers[6, 8, 9, 12, 18] we expected, and found, Rennie patients to be more disturbed, hostile, and dangerously aggressive; one Minnesota study did not find this pattern.[11] However, we also anticipated a history of frequent suicidal behavior in an acutely hospitalized, predominantly schizophrenic population, even in patients who at other times might be threatening to others. For example, one large study of 205 hospitalized schizophrenic patients found a subpopulation of individuals who engaged in both self- and other-directed aggression, and although the 21 who actually attempted homicide were less depressed, in the entire group there was no significant association, positive or negative, between homicidal threats or attempts and suicidal ideation or attempts.[19] There is also considerable evidence for a central nervous system "low serotonin syndrome," repeatedly experimentally associated with serious and often violent suicide attempts, and with impulsive, other-directed violent behavior. Although both self- and other-di-

rected violent behaviors are most often reported in "low serotonin" patients with personality disorders and/or early onset chemical abuse,[20, 21] others believe that this unifying syndrome of impulsive self- and other-directed aggressiveness may generally cut across other diagnostic categories.[22]

However, we detected significantly less suicidal behavior in our Rennie patients than in hospitalized controls. The literature provides some mixed support for this finding. A forcibly medicated New York state hospital population was found not more or less suicidal, but with more "worsening medical conditions" from lack of self-care, compared with a control group.[10] Another New York state hospital study also found an appreciable number of treatment refusers who were not eating, or ignoring important medical problems.[23] An Oregon state hospital study described more aggressive than suicidal behaviors in medication refusers, but also found frequent refusal to eat or cooperate with medical evaluation and/or treatment.[24] A California Veterans Administration hospital study of "potential" medication refusers, and a Massachusetts state hospital study of medication refusers (only 18 percent of the latter group received court-approved medication) found that refusers had lower Brief Psychiatric Rating Scale (BPRS) ratings of depression and/or guilt than acceptors.[6, 8]

Possible explanations for this disparity include: (1) most suicidal patients (an "autoplastic" style) may be relatively unlikely at other times to present with externally directed aggressive behavior (an "alloplastic" style), and may be more compliant with taking medication; (2) staff might be more energetic in addressing externally directed aggression than suicidal behavior; and (3) physicians may not feel they have good available choices for parenteral antidepressant medications. Regarding the last possibility, no patient received ECT involuntarily during this period, one of our Rennie patients did receive intramuscular imipramine, and even antipsychotics would presumably be of value for episodes of psychotic depression. We personally favor the first possible rationale, but further research would be indicated to replicate our findings and evaluate these three possible explanations.

We were surprised to find significantly more women forcibly medicated. Perhaps men might require emergency (non-Rennie) forcible medication more often, and thereafter become medication compliant and not need a Rennie procedure, but we lacked the data needed to evaluate this possibility. However, by preliminary analysis of 1991 data, the gender ratio for Rennie patients shifted in favor of men, and so we believe this was simply an instance of random sampling variation. Others have found no gender difference[2] or nonsignificantly more women.[8] We do not believe this affected our findings concerning dangerous behaviors, because we might have expected women to manifest more inner than outer-directed dangerous behavior, and our Rennie population exhibited the opposite pattern.

Conclusions

Our findings our consistent with conclusions expressed by Appelbaum and

Hoge[25] in an earlier review article, that serious treatment refusers were psychiatrically a sicker population, but ultimately did well if forcibly treated, which they usually were, as their refusals were overridden over 90 percent of the time in most studies. We found that nonemergently forcibly medicated patients more often previously required extended emergent forcible medication, had significantly longer hospitalizations, were more likely to have a known history of externally directed aggression, but less likely to have a known history of suicidal behavior. Whether this might indicate less than optimal clinical attention to self-destructive patients requires further study.

We did not find that the time- and cost-efficient Rennie review process resulted in "rubber-stamp" approvals, or in any obvious overuse. In our setting applications were rejected at a nine percent rate, consistent with the five percent rate reported in a state hospital in Oregon[24] using mandated independent psychiatric reviews, and with rejection rates of 0 to 13 percent reported in Massachusetts and New York studies, where judicial reviews are employed,[7-10, 23, 26, 27] although differences in selection process and delays before review render any conclusions tentative. Nonemergent forcible medication allowed almost all our treatment refusers to be discharged back to the community. This result was not lost on the public advocates in our hospital, who as "Rennie advocates" received copies of all Rennie approvals. They were much less concerned about our use of nonemergent forcible medication than about involuntary confinement, and indeed perceived that the Rennie process fostered involuntary patients' liberty interests in effecting their more rapid discharge.

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