

**Use of Psychotropic Medications by Persons who
Transfer From Institutions to Community Programs**

Brief Report Number 11
Of a Series on the Well Being of People with
Developmental Disabilities in Oklahoma

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DHS, Developmental Disabilities Services Division
3817 North Santa Fe Avenue, P. O. Box 25352
Oklahoma City, OK 73125

Submitted by:

Scott Spreat, Ed.D., James W. Conroy, Ph.D.
The Center for Outcome Analysis
1062 Lancaster Avenue, Suite 18C
Rosemont, PA 19010-1565
610-520-2007, FAX 610-520-5271

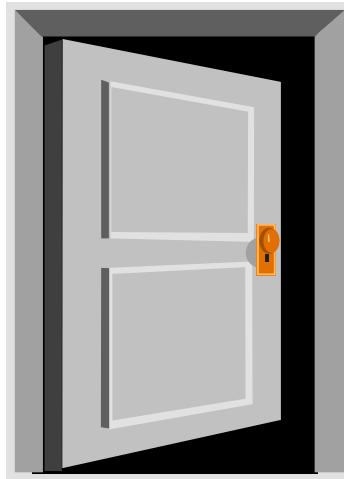
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Acknowledgement

Data have been obtained through a cooperative agreement with the Oklahoma State University Department of Sociology's Development Disabilities Quality Assurance Research Project. Since 1989 the Sociology Department at O.S.U. has conducted yearly independent assessments of consumer outcomes for approximately 3700 individuals receiving services from the Oklahoma Department of Human Services Developmental Disabilities Services Division.



“In 1990, these people were surrounded by walls.
In 1994, they're surrounded by doors.”

The quotation above is from David Loconto, a graduate student at Oklahoma State University. When he wrote this in 1995, Mr. Loconto was studying the well-being of people who moved from Hissom to community. He personally visited more than 200 Hissom class members in 1995.

Executive Summary

The use of psychotropic medication was surveyed using a sample of 429 individuals who lived in Oklahoma institutional settings in 1991 and in Oklahoma community based settings in 1996. There were 106 persons who received psychotropic medication in 1991, and 110 persons who received such medication in 1996. Reliance on antipsychotic medication was reduced, with increased use of antidepressants, anxiolytics, and sedative/hypnotics. There were 79 persons who received psychotropic medications in 1991 who did not receive such medication in 1996. There were 83 persons who did not receive psychotropic medication in 1991, but who did in 1996.

Introduction

The deinstitutionalization movement has been a major force in the mental retardation field for at least 25 years. Over 100,000 persons have moved from public congregate care facilities to smaller group home like settings in the community (Conroy, 1977; Prouty and Lakin 1996).

Braddock and Hemp (1997) describe a nation-wide trend in which mental retardation service delivery systems are evolving from a reliance on state run institutions towards an expansion of community living opportunities. A growing body of literature exists that suggests that persons who move from the institution to the community experience increased daily living skills, increased choices, and improved life quality (cf., Conroy & Bradley, 1985; Larson & Lakin, 1989).

One area that has not been widely studied with respect to community placement has to do with the use of psychotropic medication. Although there have been numerous studies of the prevalence of psychotropic medication use in the community (cf. Spreat, Conroy, & Jones, 1997), longitudinal studies of psychotropic medication use as persons move from institution to the community are relatively rare.

Earlier research (Hill, Balow, & Bruininks, 1985; Intagliata & Rinck, 1985) suggested that medication use increased subsequent to community

placement. Conroy (1996) offered more recent support for the observation that medication use increases subsequent to community placement. He analyzed the medication prescriptions of 34 individuals who were transferred from California Developmental Centers to community placements and found increased medication use across all categories of psychotropics. A more recent study (Conroy, Spreat, Yauskaukas, and Elkin, in press) reported that approximately 16.9% of a group of 427 persons with mental retardation who lived in Hissom Memorial Center received antipsychotic medication while in that institution. This figure decreased to approximately 10.8% after discharge to community settings. They also noted that the generally unacceptable practice of polypharmacy decreased from 35 instances to just two. Although the use of antipsychotic medication decreased, modest increases were noted for sedatives, anxiolytics, blood pressure medications, Lithium, antidepressants, and anti-OCD drugs. The number of persons with prescriptions for psychotropic medication actually increased slightly from 139 to 164. It would appear that there was slightly more psychotropic medication used in the community, but use of the antipsychotic medication has decreased. Thinn, Clarke, and Corbett (1990) offered contradictory findings. They studied the use of antipsychotic medication among 64 persons with mental retardation who moved from

hospital settings to community settings. No significant differences were detected among data collected two years prior to discharge, at discharge, and six months after discharge.

With the exception of Thinn, Clarke, and Corbett (1990), the literature suggests an increase in the use of psychotropic medication subsequent to transfer from institutional settings to community settings. The purpose of this study was to review the use of psychotropic medications in the treatment of a large group of persons who have mental retardation and who lived in an institution in 1991 and in a community setting in 1996. We were particularly interested in determining whether the use of medication increased subsequent to placement in community settings.

Methods

Subjects

The subjects for this investigation were 429 individuals who received services through the Oklahoma mental retardation system in 1991 and in 1996. They represent all Oklahoma service recipients who lived in an Oklahoma institution in 1991 and in a community setting in 1996. In 1991, these individuals lived in either Enid State School (n=150), Hissom Memorial Center (n=246), or Paul's Valley (n=33). These individuals lived in buildings serving, on the average, 19.2 individuals. All 429 individuals had transferred to community-based programs by 1996. There were 142 persons living in group homes and 287 persons living in Supported Living Arrangements. The average size of the 1996 residence was 3.6 individuals.

There were 238 males and 191 females in this group. Their average age in 1996 was 36 years (sd = 10.2). Level of mental retardation presented bimodally. There were three persons without mental retardation, 124 persons with mild mental retardation, 76 persons with moderate mental retardation, 67 individuals with severe mental retardation, and 130 individuals with profound mental retardation. Twenty-nine individuals were not classified at the time of the survey. Approximately 83% of the

individuals were white. Ten percent were black, and 6.5% were american indians.

Instrumentation

Oklahoma administers the Developmental Disabilities Quality Assurance Questionnaire (DDQAQ)(Oklahoma State University, 1991) for all consumers (i.e., service recipients) within its mental retardation service system on an annual basis. This assessment is administered by interviewers contracted by the state, and it includes major sections on adaptive behavior, challenging behavior, living site conditions, health, social interactions, community integration, service planning, and consumer satisfaction. A copy of this questionnaire is available from the authors.

Of particular interest to this analysis were the series of questions on the use of psychotropic medication. Interviewers reviewed records and asked staff about the types and amounts of medication prescribed for each consumer. It was necessary to aggregate classes of psychotropic medications for descriptive purposes. The following classes of psychotropic medications were used: Antipsychotics, Antidepressants, Anxiolytics, Sedative/Hypnotics, Stimulants, Lithium, and medications used to treat Obsessive Compulsive Disorder. Table 1 presents the classification scheme.

Table 1
Medication Classification Scheme

<u>Antipsychotics</u>	
Thioridazine (Mellaril)	Chlorpromazine (Thorazine)
Haloperidol (Haldol)	Thiothixene (Navane)
Fluphenazine (Prolixin)	Mesoridazine (Serentil)
Trifluoperazine (Stelazine)	Molindone (Moban)
Clozapine (Clozaril)	
<u>Anxiolytics</u>	
Diazepam (Valium)	Chlordiazepoxide (Librium)
Lorazepam (Ativan)	Diphenhydramine (Benadryl)
Hydroxyzine (Vistaril)	Buspirone (Buspar)
Alprazolam (Xanax)	Chlorazepate (Tranxene)
Oxazepam (Serax)	Flurazepam (Dalmane)
Prazepam (Centrax)	
<u>Antidepressants</u>	
Imipramine (Tofranil)	Amitriptyline (Elavil)
Doxepin (Sinequan)	Nortriptyline (Pamelor)
Trazadone (Desyrel)	Fluoxetine (Prozac)
Desipramine (Norpramine)	Trimipramine (Surmontil)
Maprotyline (Ludiomil)	Protriptyline (Vivartil)
Isocarboxazid (Marplan)	Tranylypromine (Parnate)
Amoxapine (Asendin)	Phenelzine sulfate (Nardil)
<u>Stimulants</u>	
Amphetamine sulfate (Benzedrine)	Dextroamphetamine (Dexedrine)
Methylphenidate (Ritalin)	Pemoline (Cylert)
<u>Sedatives/ Hypnotics</u>	
Benadryl	Chloral Hydrate (Noctec)
Temazepam (Restoril)	Triazolam (Halcion)
<u>Anti-OCD Drugs</u>	
Paroxetine (Paxil)	
Clomipramine (Anafranil)	

Data Collection Procedure

Data were collected by graduate students and staff from the Sociology Department at Oklahoma State University. The University conducts annual two-day training sessions on data collection methods to prepare the collectors. Appointments with consumers were coordinated by the data collectors and a scheduling clerk from the University. The collectors were instructed to be flexible and avoid interference with routines and schedules. Data collection required access to: (a) the person, (b) whomever knew the persons best on a day to day basis, (c) the person's home, and (d) records concerning the person's services and supports. Data collection visits are scheduled annually (since 1990) and they take approximately 70 minutes to complete.

Study Design

The study is descriptive in nature, and it is not designed to permit causal inferences. Data on the use of psychotropic medications were collected in the institutions in 1991 and in the community in 1996. These two data sets were compared. The design is a simple pre-post design.

Results

Table 2
Consumers Receiving Psychotropic Medication in 1991 and 1996

<u>Medication</u>	<u>1991</u>	<u>1996</u>	<u>1991 & 1996</u>	<u>% Change</u>
Antipsychotics	85	62	12	-27.1%
Anxiolytics	23	37	5	60.1%
Antidepressants	5	22	0	340.0%
Stimulants	1	1	0	0.0%
Sedatives/Hypnotics	1	15	0	1400.0%
Anti-OCD Drugs	0	8	0	-----
Lithium	2	5	0	150.0%
Any Psychotropic	106	110	27	3.8%

Table 2 summarizes the use of psychotropic medications in 1991 and 1996. At the grossest level of analysis, it appears that the use of psychotropic medication has remained essentially unchanged. There were 106 individuals (24.7%) receiving a psychotropic medication in 1991 in the institutional settings, and there were 110 persons (25.6%) receiving psychotropic medication in the community settings in 1996. Curiously, only 27 persons who received a psychotropic medication in 1991 were still receiving any psychotropic medication in 1996. This means that 79 persons were discontinued from psychotropic medication and 83 persons were started on psychotropic medication.

An interesting pattern is also evident with respect to individual medication classes. As Table 2 indicates, the use of antipsychotic medication declined from 1991 to 1996, while the use of anxiolytics, antidepressants, sedative/hypnotics, lithium, and anti-OCD drugs increased. The decline in the use of antipsychotic medications was approximately 27%, which was balanced by the increased use of other forms of psychotropic medication.

Table 2 also reveals that the persons who received psychotropic medication in 1996 were generally not the same persons who received them in 1991. This pattern was consistent across all medication classes. Most persons who received psychotropic medication in 1991 were not receiving it in 1996; however, the introduction of psychotropic medications to new consumers kept the overall utilization essentially unchanged.

Antipsychotic medications typically raise the greatest degree of medical concern, due largely to their widespread use and their association with the development of tardive dyskinesia (Aman & Singh, 1991). In 1991, 85 persons (19.8%) were receiving antipsychotic medication. By 1996, this number had decreased to 62 (14.5%). Of the original 85 persons who received antipsychotic medication, only 12 were still receiving it in 1996.

Fifty (50) new persons had been introduced to antipsychotic medication, and 73 persons had been weaned from it.

Daily doses of antipsychotic medication were converted to thiorazine equivalence units (AMA, 1978) to permit comparison. The mean overall dose in 1991 was 164.0 mg/day, and the mean overall dose in 1996 was 115.9 mg/day. These two values were not significantly different. When the analysis was limited to those persons who received antipsychotic medication in 1991, the pattern was strengthened. The mean dose in 1991 was 276.2 mg/day, and the mean dose in 1996 was 45.5 mg/day. A correlated t-test ($t=7.23$, $df=75$, $p=.000$) revealed these two values to be different.

Discussion

The data reviewed in this study offer no support for the notion that deinstitutionalization is associated with the increased use of psychotropic medication. The number of persons who received psychotropic medication was essentially unchanged from the 1991 institutional placements to the 1996 community placements. The basic limitations of our design prevent us from making any sort of causal inferences about medication practices; however, the fact that the use of psychotropic medications did not increase seems irrefutable. It should be noted, however, that there is as much as a five-year span between data points, and this study does not address medication use between those two data points.

The tendency to rely on antipsychotic medication was reduced. In 1991, antipsychotics accounted for over 80% of psychotropic prescriptions. In 1996, this was reduced to 56.4%. Concurrent with the reduced reliance on antipsychotic medication was an increased use of anxiolytics, antidepressants, and sedative/hypnotics. The pattern of medication use changed, although the demand for medication (or at least use of medication) remained relatively constant. It is a little difficult to speculate why the pattern of drug use would change, while the overall rate of use was maintained. It should be noted that many psychiatrists (cf., Weisblatt, 1996)

were exploring different medication alternatives during this time period. To some extent, our data may reflect changes in the way that psychiatry is practiced from 1991 to 1996.

Alternative explanations also exist. One notes that all 429 of these consumers lived in just three institutions in 1991, but lived in approximately 120 group home or SLA settings in 1996. It is perhaps reasonable to assume that the prescription of psychotropic medication not only changed to different physicians, but also to a greater number of physicians. In addition to the changes in physicians, one must note that individual consumers are quite likely to have changed over the five year period of time, and that these changes have resulted in different treatments. The list of possible alternative explanations could go on, but the intent of this study was essentially unidirectional. We sought to determine whether medication use increased following deinstitutionalization, and we were unable to find data to support that hypothesis. We offer no explanations for the decreased reliance on antipsychotics and the increased use of alternatives.

The decreased use of antipsychotic medications, assuming that it was not accompanied by increases in socially inappropriate behaviors, must be viewed as positive. Some (Gualtieri, Schroeder, Hicks, & Quade, 1986) suggest that the onset of tardive dyskinesia is related to the total lifetime

dosage of antipsychotic medication. It would seem reasonable to conclude that any process that results in reduced intake of antipsychotic medication might be beneficial.

The number of persons weaned from psychotropics while many others were introduced (or perhaps reintroduced) to them has implications for research. Any longitudinal study that begins with a sample of persons who take medication may yield results that underestimate the use of medication. This study suggests that longitudinal studies must include both persons who take psychotropic medication and those who do not take such medication. The failure to include persons in the initial sample who do not take psychotropic medication will dramatically bias the results.

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