the influence of mental derangement and distortion of mental process, benign aggression may give way to the more deep and primitive malignant leading to an exceeding tendency towards destructive behaviour.

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الملـــوجز

الخطورة (البالغة درجة الاجرام) فى المرض النفسى

(عينة مصرية من مستشفى الخانكة للامراض النفسية)

يقدم هذا البحث دراسة لأعداد وأنواع الجرائم التى ارتكبها ٦٩٢ مريضا نفسيا من نزلاء مستشفى الخانكة للامراض النفسية فى الفترة من ١٩٦٧ حتى ١٩٧٧ ، ولقد اتضح أن ٣٩٥ من بين تلك الجرائم يعتبر من الجرائم الجسيمة، كما أن ٢٩٧ يعتبر من الجرائز الصغرى ، ويفسر الباحث النسبة المرتفعة لمرض الفصام كمسئول عن الجريمة بنسبة أكثر تواترا من سائر الأمراض بارتفـاع نسبة الفصاميين فى العينة محل الدراسة وكذلك باحتمال ارتفاع نسبة هـذا المرض أصلا فى المجتمع الأوسع .

ABSTRAIT

Le Danger en Psychiatrie

Une étude du nombre et des différents genres de crimes dans 692 patients qui sont mentallement malades et qui sont consignés à l'hôpital mental de l'état, depuis 1961 jusqu'à 1977, a été faite. Parmi ceux-ci, 395 sont des crimes majeurs et 297 des crimes mineurs. Le diagnostic de la catégorie qui y est lu ptus impliquée est la schizophrénie, suivie par les troubles maniaco-depressives. La grande prévalence de la schizophrénie, comme une source de danger parmi les patients qui sont mentallement malades va en ligne avec la plus grande prévalence de ce desordie dans l'échantillon procuré et dans la population toute entière.

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The Lithium Clinic for Treatment and Prevention of Manic Depression: A Cost Benefit Approach

by Ronald R. Fieve

ABSTRACT

Approximately 2-3% of a nation's mental illness is likely to be some form of primary affective disorder. Since the discovery of lithium for treatment and prevention of manic depression, and the discovery and widespread use of antidepressant drugs, the outlook for treatment and prevention of affective illness is extraordinarily good provided that these new discoveries can effectively reach the masses who are afflicted with mood disorders. Cost benefit studies are being used to determine the most efficient means of reaching large numbers of patients with these treatments. In the United States a fast-developing model for the treatment and prevention of affective illness is the Lithium Clinic. Based on the medical model, the Lithium or Affective Disorder Clinic makes use of an expert consultant, paramedicals, rating scales, and drug monitoring to provide safe, effective and inexpensive care for a large number of affectively ill patients.

Although some progress has been made in America and abroad toward the development of community mental health care centers, we continue to hear of the inadequate efforts of local and national departments of mental health to decentralize the large, antiquated hospitals into smaller units. The urgent need to increase the availability of psychiatric services at the community level has been recognized for some time. A master plan established during the Kennedy administration proposed the organization of specific catchment areas in America which would then be served by the community mental health centers. The plan requires that these centers have a number of outpatient facilities and that they provide direct access to an attached inpatient hospital unit where brief hospitalization, day care, and long-term care are available when necessary.

Serious criticism has been levelled at this excellent blueprint. The transition from the large city, state-operated public mental institution to the new, smaller community mental health center means that more patients will live at home, returning only for outpatient treatment. Many citizens are alarmed, frightened, and angry about this development, and they have accused the department of mental health of abandoning their responsibility by returning sick patients to the community.

We are now emerging from the era of psychiatry when government funding depended simply on **politics** and a few nationally prominent psychiatrists' opinions of what areas deserved funding. We now are knee deep in the age of cost-benefit analysis which simply means that the funds for service delivery to mentally ill patients in any community will depend on hard figures and facts, e.g. which **specific treatment** for which **specific illness** delivered in which specific way has been proven to be the most cost effective.

In our research and treatment of affective disorders, we have been concerned with determining whether it is possible to achieve successful long-term outpatient lithium prophylaxis of affective disorders and to keep the patient an essentially well member of the community. There are many data (which I will summarize) demonstrating a consistently high level of success with lithium prophylaxis. Furthermore, our experience indicates that a high level of prevention of mood disorder can be achieved in a specialized outpatient clinic, the so-called Lithium Clinic, which we have modeled and employed for our own patients at the Columbia Presbyterian Medical Center and New York State Psychiatric Institute over the past 15 years.

CLASSIFICATION OF AFFECTIVE DISORDERS

The primary affective disorders are generally subdivided according to the bipolar-unipolar classification of Leonhard and associates (1962), Perris (1966), and Winokur **et al.,** (1969).

Bipolar I patients are those who have been hospitalized for mania. (In this category, as well as in the unipolar I category, treatment in the home requiring special observation and nursing care is considered equivalent to hospitalization.) Bipolar II patients have been hospitalized for depression only; their hypomanias are usually mild and do not require treatment. Bipolar-other patients have been treated as out-patients for either hypomania or depression. The cyclothymic personalities meet the criteria for mild mood swings but have not been treated.

Although this categorization is still somewhat tentative, there are clinical, genetic, and pharmacological criteria that support such a classification (Fieve and Dunner, 1975).

PREVALENCE

Since many individuals with severe affective disorders never seek treatment, it is difficult to estimate the prevalence of manic-depression and recurrent unipolar depression.

In a study published in 1965, Winoker and Pitts estimated that approximately 3 percent of the population suffers from clinical depression at any given time. Lehman (1971) gave a figure of 3 to 4 percent, calculated on the basis of the number of suicides per 100,000 depressed patients. Winokur and Pitts and Lehman all worked with the inadequate figures available in 1964, and their samples included only those depressed individuals who required treatment. In 1974, Gruenberg found that 10 percent of a sample of 309 state hospital employees interviewed at work reported a clinically depressed mood but were able to function. This sample procedure excluded depression severe enough to necessitate hospitalization or absence from work. Manheimer (1974) estimated in 1974 that 15 percent of the total population of this country suffers from depression. In 1973, Cisin found that 15 percent of a randomly sampled population had depressive symptomatology; in a sampling of two California communities, he set the figure at 20 percent. These data indicate that there are between 18 and 20 million Americans suffering from depression.

In a 1964 study in Iceland, Helgason determined that the risk of developing an episode of affective disorder during a lifetime is 7.1 percent; this figure is an estimate based on his statistical study of data covering the period from 1895 to 1957. The disorders surveyed included manic-depressive psychosis, psychogenic psychosis (depressive), and depressive neurosis. The average risk was 5.2 percent for males and 9.0 percent for females.

In a Swedish study based on a sample community of 2,600 people studied for 10 years, Hagnell (1966) found a 14 percent risk for developing an episode of clinical depression before age 60; this figure excludes the major affective disorders (psychotic depression, involutional melancholia, and mani-depressive illness).

DIAGNOSIS AND TREATMENT

One survey of the estimated 600,000 discharges from general psychiatric inpatient units over a 1-year period (1970-1971) revealed that 40 percent of the female patients but only 17 percent of the males received a primary diagnosis of depressive disorder (National Institute of Mental Health, 1973). Bertram Brown, (1973), ex-Director of the National Institute of Mental Health, has estimated that half of all hospitalized patients over the age of 60 have a treatable depressive illness, usually not recognized as such, and that one-third or more of all patients seeing general practitioners are suffering from depression.

It is apparent that the affective disorders continue to be seriously underestimated by mental health authorities and the general public. Even more alarming is our poor record in diagnosing these disorders.

Based on these prevalence rates, affective disorders requiring treatment are at least 3 to 4 times more prevalent than schizophrenia. In 1970, a United States-United Kingdom international diagnostic study (Cooper and associates, 1972) showed that psychiatrists in nine state hospitals in the New York metropolitan area mislabeled 86 percent of

all affective disorders; for example, 63 percent were mislabled as schizophrenia. The project diagnostic team found 38 patients with depressive psychosis and 13 with depressive neurosis in the sample of 192 patients; the state hospital doctors diagnosed only 7 cases of depressive psychosis and 2 of depressive neurosis in this group. In no case was manic behavior correctly diagnosed by the hospital psychiatrists as compared with the diagnosis of the independent project team.

This problem of incorrect diagnosis leads to improper treatment of affective disorders, which certainly contributes to the high readmission and social breakdown syndrome in many of these patients. With improved diagnosis and treatment, the community would have less cause to fear that inadequately treated patients would be returned to society.

Inadequate diagnostic and lithium treatment facilities exist in many of our hospitals and community mental health centers. One admitting hospital psychiatrist who was trained in our lithium program related that none of the 5,000 patients seen in his facility had been given a diagnosis of manic-depression — nor was lithium being dispensed. Recently, our team visited another state hospital unit a population of 2,000 outpatients and 300 inpatients. No formal lithium facilities existed; very few patients were receiving lithium. Surely, a change in the detection and treatment of affective disorders is in order if lithium treatment is as good as its proponents say it is.

EFFECTIVENESS OF LITHIUM TREATMENT

The work of Cade (1949), Schou and associates (1954), our group at the New York State Psychiatric Institute, and others has established the efficacy of lithium in the treatment of mania. What is not so well known is whether lithium can prevent future episodes of depression in bipolar manic-depression and, particularly, whether it is effective prophylactically in the unipolar recurrent depressive disorders. During our 15 years at the Lithium Clinic, we have accumulated data on the efficacy of lithium prophylaxis in mania as well as depression in both bipolar and unipolar affective illness.

The double-bind lithium discontinuance studies of Baastrup and associates (1970), Melia (1970), and Hullin and associates (1972) provided data indicating that relapse occurred in 51 percent (No. 25) of the bipolar patients on placebo. Relapse occurred in only 11 percent (No. 6) of the group maintained on lithium. In the lithium-placebo randomization studies of Coppen and associates (1973), Prien and associates (1973), Fieve and Mendlewicz (1972), and Stallone and associates (1973), 62 percent of the aggregate of 60 bipolar patients responded to lithium treatment, while only 5 percent of the 61 placebo-treated patients responded. Employing a third design (a cross-over study), Cundall and associates (1972) obtained similar results.

Double-blind lithium prophylaxis studies with unipolar subjets have also provided encouraging data. In the lithium discontinuance study by Baastrup and associates (1970), 53 percent of the 17 unipolar patients receiving placebo suffered relapse within 6 months, but there was no relapse among the 17 patients maintained on lithium. In the lithium-placebo randomization studies of Coppen and associates (1973) and Fieve and associates, 25 percent of the aggregate of 24 placebo subjects responded to placebo, while 86 percent of the aggregate of 21 lithium subjects responded to treatment. Prien and associates (1973) and Fieve and associates studies a total of 35 placebo and 37 lithium unipolar subjects over a 2-year period and found that 6 percent were without failure on placebo and 34 percent were without failure on lithium. In our lithium-placebo study of unipolar patients, we found the mean number of depressive episodes per year to be 2.7 times higher for lithium patients (1.6 versus 0.59).

THE LITHIUM CLINIC : A SERVICE DELIVERY MODEL

During the 15 years in which we have developed our research traiing, and treatment program in the Lithium Clinic, we have also evaluated our manpower utilization. The clinic population consits of approximately 200 manic-depressive (bipolar) and recurrent depressive (unipolar) patients We undertook an experiment with a service delivery model in our ef-

forts to conduct research while providing an effective, efficient system for the care of this recurrently ill population.

Clinic Organization and Procedures

Patients accepted into the clinic are diagnosed independently by two psychiatrists as having either manic-depressive or recurrent depressive illness and are required to have a thorough medical screening before going on psychotropic drugs. All research protocols require informed content. The patient load is handled by one supervising psychiatist, four or five paramedical personnel and rating teams. The rating team personnel, consisting of a psychiatric nurse and one or two aides, varies from week to week, so that no patient is seen frequently by the same staff members.

All team members have been trained and supervised by a psychologist or a psychiatrist in the administration of a structured interview, a modified version of the Hamilton mood and behavior rating scale (Hamilton, 1967). Separate cards for demographic data, initial diagnostic evaluation and for each subsequent clinical research visit are scored on forms which facilitate easy computer storage and retrieval of all data. The rating teams interview each patient, usually in pairs. Blood samples are taken at each clinic visit, and the technicians alert the medical staff if serum lithium levels are too high or too low.

New patients are seen once a week until they are stabilized on lithium and/or tricyclis and clinically well, at which time they come in every 4 weeks for clinical evaluation, behavior and mood ratings, and serum monitoring. A physician is called in only if the patient requires a change in dosage, is experiencing mood change, or shows possible symptoms of toxicity. If a patient experiences an affective episode, a physician prescribes additional medication until the episode subsides.

The Lithium Clinic is held twice a week for 2 hours each and is attended by the entire group of 200 patients each month. (The name

Lithium Clinic is a misnomer in the sense that other drugs are given and other services, including social work, nursing, and referral, are provided. We have tried calling it the "affective disorder clinic" and the "recurrent depression clinic," but staff and patients have perpetuated the current name.)

This clinic model makes optimal use of its small medical staff by maximum utilization of paramedicals. This enables us to manage a large patient population quickly, inexpensively, and safely. The traditional model of patient-problem and psychiatrist has been shifted to patient well-care and rating team with a supervising psychiatrist.

Our focus in the clinic is on the presence or absence of an affective episode, and the staff makes little attempt to deal with the interpersonal or intrapsychic problems of the patients, except as they relate to mood. Well-care during the symptom-free period has resulted in decreased psychiatric contact and increased emphasis on the use of nonphysician rating teams.

Comprehensive plan for Lithium Treatment of Manic Depression

Now I will attempt to describe a rational plan for the development and implementation of a comprehensive mental health system for lithium treatment of manic depression. On the basis of the epidemiology and data, the incidence of misdiagnosis and the specificity of lithium, a model delivery system will be described for a specific geographic area and at-risk population incorporating technical, administrative, and economic factors.

As in any service organization, the incorporation of a major new technology into its delivery system usually has a lag time of from 5 to 10 years. For example, the technology of rehabilitation services for the chronically mentally ill, although known since 1964, is still in process of being implemented into our system of care today. (Daily, 1974) A

rational plan for the use of electroconvulsive therapy has never developed as a part of a comprehensive service system, resulting in wide-spread abuses in its implementation for the treatment of mental illness. The overly reactive recent legislation in California establishing severe restrictions on its application and thereby almost eliminating its use, is an example of community backlash to irrational planning (Cammer, 1975). Because of the lethal toxicity of lithium it is even more imperative that there be adequate guidelines and regulations for its use in the treatment of the affective disorders. Today we are in the early phrases of its development as a therapeutic modality, and therefore, this is the most appropriate time to design a model delivery system. It has been stated that "if what some authors are claiming for lithium does in fact appear to be true, we have for the first time in the history of psychiatry a simple naturally occuring salt that controls a major mental illness. Its impact could equal the impact of insulin on diabetes!" which, unlike lithium for manic depression, has effectively reached most of the underdeveloped countries in the world.

PILOT EXPERIMENT: INVESTIGATING COST EFFECTIVENESS OF LITHIUM TREATMENT FOR MANIC DEPRESSION

GEOGRAPHIC AREA AND TARGET POPULATION:

Geographic areas selected for planning a model delivery system.

The geographic areas chosen are the Murray Hill catchment area, with a population of 184,570, and the East Side catchment area, with a population of 78,872, of New York City (Daly, 1978).

The Murray Hill catchment area is one of the most diverse areas in Manhattan (Christmas). On one hand it has extreme wealth and on the other glaring poverty. It has highly concentrated commercial areas as well as vacant lots and substandard housing. Another feature of the changing nature of the catchment areas is that hotels which served the tourist and commercial traveler many years ago are currently being used as single-room occupancy residences (Table B).

The East Side catchment area is the next to smallest of 11 catchment areas in Manhattan. During fiscal year 1976 to 1977, this area had added to it the Urban Development Corporation Complex on Roosevelt Island, where the first units will contain 10,000 persons. In subsequent years, as the complex is completed, approximately 20,000 more persons will be residing in this area. The East Side is an area of superior medical institutions, colleges, luxury apartments, and old railroad tenements. Located within it are many young newcomers to the city of New York, especially young women of low or moderate income, with problems of adjustment to an urban culture with its accompanying isolation and depression. There is great affluence. The percentage of the population 65 years and older is almost 18 percent, considerably greater than that of the rest of Manhattan and 1.5 times that of New York City. Women pedominate three to two over men. There is a high number of unmarried persons. The rate of State hospital admissions per 10,000 is the smallest in Manhattan. Noteworthy however, is the suicide rate, which is more than 1.5 times that for the city (Table B).

Target population.

The estimate of the target population, namely, the number of lithium-responsive clients present in these two catchment areas, is purely speculative. The only statistical data found in the reporting system for hospital and outpatient clinic admissions established by the State of New York Department of Mental Hygiene. In fiscal year 1973 to 1974 for New York City, there were 137,105 admissions to local services, and we have diagnostic material on 114,804 cases. There were 18,522 admissions to State psychiatric centers and there is diagnostic material available on 16,638 cases. Of this total number, only 2,535 patients were diagnosed as having major affective disorder, 1,712 from local services and 823 from State admissions (Tables C and D).

These data do not include patients treated in private practice or proprietary hospitals. Despite this fact, these statistics are significantly lower than our estimate of approximately 1,000 manic depressive patients

per 200,000 population. Also the total number of major affective disorders and psychotic depressive reactions, 3,769, for New York City is much lower than our epidemiologic data would suggest. During the same year, there were 26,00 schizophrenic and 12,000 neurosis cases admitted to our local and state services for New York City. The conclusion which appears evident is that there has to be large-scale mis-diagnosis by the clinicians on our mental health agencies. Since depressive neurosis is within the category of neurosis, we can assume that many of these are really manic-depressive disorders. Continuing this line of reasoning, the schizophrenia categories include schizo-affective disorders and do not distinguish between reactive and process schizophrenia. Again, within these large categories there must be many manic-depressive disorders. It becomes imperative, now that we have a specific treatment for a group of affective disorders, that mental health administrators educate clinicians, in this instance, New York City, toward greater precision in psychiatric diagnosis. On the basis of our present statistical data, there were diagnosed in these two catchment areas only 65 manic-depressive disorders. Certainly, as regards its public health aspects, these prevalence data would not be enough to cause any particular focus of attention by mental health officials. But in this case it is because the number is so low that mental health administrators should be concerned, and a model delivey system for this specific drug-responsive disease should be developed.

Model Delivery System.

A question is often asked by young psychiatrists: whatever happened to manic depressive illness? Within this question is implied one of the major obstacles to planning a comprehensive tratment system for this disorder. Because it is assumed mistakenly by most practitioners to be a rare disorders, there is very little interest in any treatment methodology especially when it is associated with a drug known for its toxicity and deaths. Combine this lack of enthusiasm by the provider with an almost advertisement blackout because of its commercial nonprofitability, and you have in New York City and elsewhere in the world an almost scandalous underutilization of lithium.

Add to this the loose and amorphous state of psychiatric diagnosis, the bias of many providers toward a quagmire of psychodynamic etiology and psychotherapeutic treatment with its financial incentives, and finally, the absence in some psychiatrists of a residual of a medical orientation of clinical pharmacology, and the planner is faced with a technical change in a complex system that does not recognize the need for it. A recent summary of the findings by the State of New York Legislative Commission on Expenditure Review emphasizes the current mismanagement of manic-depressive illness: "However, the expanded outpatient services in the State have not been able to prevent the high readmission and return rates among such groups as those with five or more previous admissions, those who leave against advice, those on family care, and those diagnosed as manicdepressive or chronic schizophrenic. Sixty-five percent of the manic-depressive disorders were readmitted within sixteen months." (Marchi, 1975).

Therefore, inherent in any model for the delivery of comprehensive services for the lithium-responsive manic depressive patient, there must be training, public and professional marketing, and continued research. To accomplish this there is a need for at least one comprehensive center in New York City whose exclusive efforts will be to focus on the affective disorders. The possibility of further organic breakthroughs, the need for careful and refined diagnosis, the low toxic-therapeutic ratio of the lithium salt, and the use of this agent as a prophylaxis with periodic antidepressant drugs mandates a centralized and concentrated center for research, training, and public information. The errors in mislabeling the affective disorders, the springing up of lithium clinics without adequate controls and evaluation, and the large gap in services for the affective disorders can be corrected by such a center. The center would have a public education arm which would work through the pharmaceutical industry, medical schools, the New York County District Branch of the American Psychiatric Association, the City of New York, Department of Mental Health and Mental Retardation Services, the State of New York Department of mental Hygiene, and the new health system agency for the New York City district to disseminate information and plan for

services. It would have a manpower training section to teach paramedics the screening, record-keeping, monitoring, and evaluation techniques to be used by them in the affective disorder clinics thoughout the city. Similar centers could be launched by WHO in underdeveloped countries.

A network of specialized affective disorder clinics should be linked with this center while at the same time remaining an integral part of their catchment area comprehensive mental health delivery system. Where there is no clinic in a catchment area a need assessment should be performed, and on the basis of this, the gap could be filled. If you had a closed system, my own estimate would be one clinic per 200,000 population. Schou (1973), Fieve (1975), Kerry (1969) and Freyhan **et al** (1970). all support the concept of specialized clinics for more efficient and productive psychiatric treatment of the affective disorders: "The executive of a properly controlled lithium treatment is of utmost importance. Treatment carried out negligently or without knowledge of the principles involved is hazardous. It is usually advantageous to let a small group of doctors and nurses be responsible for the administration of lithium so that they get to know the patients and the treatment." To facilitate the team approach with the extensive use of paramedics, a special unit is a necessity. I see the unit as a health maintenance organization, essentially a well clinic where, along with accurate diagnosis and lithium expertise, there is also the use of anti-depressants and other secondary measures. I view the affective disorders or Lithium Clinic as analogous to the specialized clinics which have emerged in medicine such as those in diabetes, arthritis, cardiology, and hypertension. The main action of prophylactic treatment is to prevent or suppress further recurrences of mania or depression. The benefit to be derived from lithium treatment therefore. depends on how often episodes occur without treatment. Patients with few or infrequent episodes stand to gain little from long-term administration of lithium, whereas this treatment may radically alter the life course of a patient who suffers from frequent and severe relapses. A frequency of two severe episodes in two years is often used a convenient lower limit for inclusion for **treatment.**

This network, through the comprehensive center, would relate di-

rectly to the City, State, Fed. or WHO Department of Mental Health and Mental Retardation Services, the agencies that have the responsibility for planning, contracting, and evaluating mental health services for specific areas information fed back to the department by the comprehensive center would be instrumental in assisting the agency in those functions which are related to the treatment of affective disorders (Fig. I).

One further element of the delivery system is in-patient psychiatric beds for the treatment and study of severe toxic reactions to lithium.

This is a regional model with the affective disorder clinic an element of service in an open system of comprehensive mental health services for that catchment area. Coordination and planning is implemented by the subregional mental health committees of the City, State Federal or WHO sections of the Department of Mental Health and Mental Retardation Services (Chrismas, 1973).

ECONOMIC IMPLICATIONS IN THE AMERICAN COST EFFECTIVE PILOT STUDY

Again on the basis of educated mental gymnastics and only considering the hospital treatment of affective disorders, eliminating for now the immense cost in outpatient drugs, psychotherapy, electric convulsive therapy, and the social and occupational impairment resulting from these disorders, we can assume that without lithium treatment, 800 lithium-responsive clients, 1 out of 50 hospitalized per year times 40,000, will require hospitalization for approximately 21 days at a cost of $3,360,000, that is, 800 times 21 times $200 per day. The maintenance cost for lithium treatment in an affective disorder clinic is approximately $350 per client per year, making the total cost for 800 clients $280,000. Of course, some of these patients will require hospitalization at times, but this cost factor would be counterbalanced by considering the outpatient costs if these clients were not on lithium. O'Connell, and associates (1977) compared the annual medical costs for a group of 28 manic-depressive patients for a period of one year prior to and during treatment

FIGURE I

Orgnizational Chart of Model Comprehensive

Lithium-Responsive Affective Disorder Treatment System

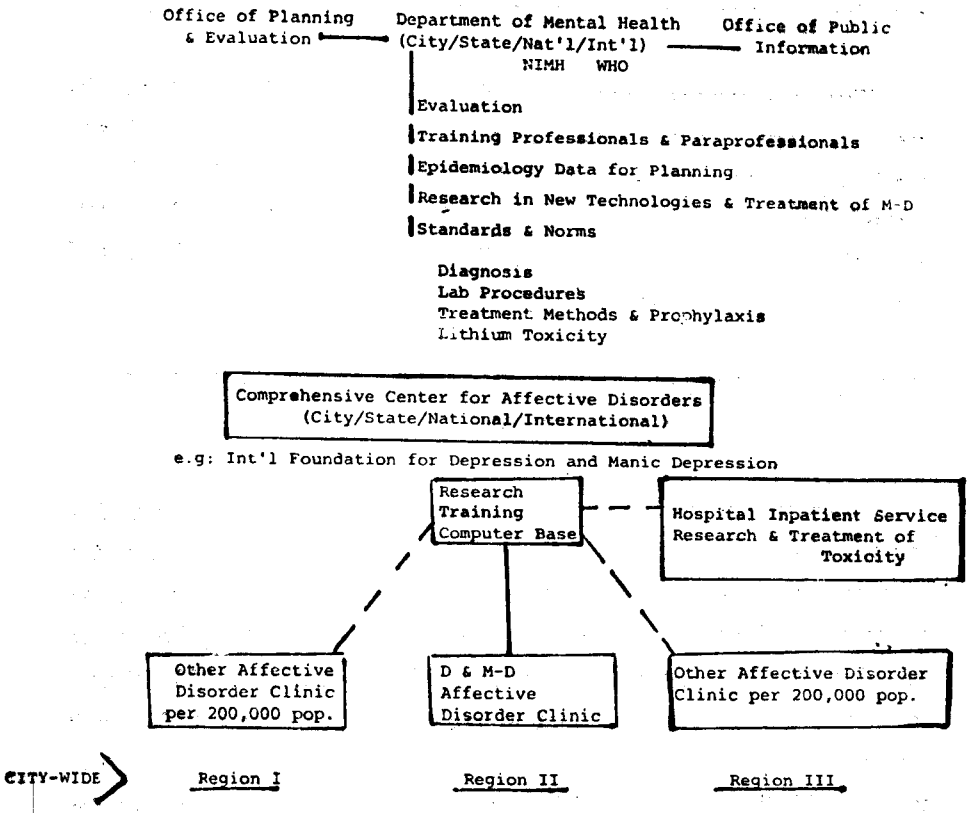

Table II: Patients attending the out-patients clinic at Taif according to their nationalities, Sex and Diagnosis During the Year (1976)

Nationality	Saudi		Yemani		Hadrami		Palestinian		Pakistani		Egyptian		Other		Total		
Sex / Diagnosis	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
Mental Retardation	456	144	60	16	9	6	6	3	-	-	-	-	6	-	537	169	706
Organic Brain Syndromes	401	384	54	15	9	-	-	9	6	-	-	-	-	-	470	408	878
Psychiatric Disorders of Epilepsy	987	513	72	18	6	-	18	-	3	-	-	-	12	9	1098	540	1638
Drug Dependence	133	-	9	-	-	-	-	-	-	-	-	-	2	-	144	-	144
Manic Depressive Psychosis	162	171	6	3	-	-	-	-	-	-	-	-	6	3	174	177	351
Schizophrenia	1207	652	47	25	40	10	5	12	5	-	5	2	33	7	1342	708	2050
Paranoid States	126	39	9	-	2	-	3	-	3	-	-	-	13	-	156	39	195
Neurosis	1793	1615	212	42	30	10	26	10	9	9	3	-	21	-	2094	1686	3780
Personality character disorder	43	4	1	1	1	1	-	-	-	-	-	-	-	-	45	6	51
Mano Pause Symptomatic disorder	8	131	2	6	-	-	1	-	-	-	-	-	-	2	11	139	150
Behaviour disorder of adulescent and childhood	102	12	9	-	-	-	-	-	-	-	-	-	-	-	111	12	123
Neurological diseases	285	72	33	-	-	-	-	-	-	-	-	-	6	12	324	84	408
Psychosomatic disorder	135	156	18	15	6	-	-	-	-	-	-	-	6	-	165	171	336
Non-Psychiatric diseases or diseases of Nervous System	175	93	18	11	4	-	1	-	-	-	-	-	-	-	198	104	302
NORMAL	30	12	2	1	-	1	-	-	-	-	-	-	-	2	32	16	48
GRAND TOTAL	6043	3998	552	153	107	28	60	34	26	9	8	2	105	35	6901	4259	11160

-:(TABLE: III):-

DISTRIBUTION OF NEW PATIENTS ATTENDING OUT-PATIENTS CLINIC
DURING: 1394 to 1396 H.
(1974 - 1976)

YEAR	1394 H.				1395 H.				1396 H.			
SEX / MONTHS	MALE	FEMALE	CHILD	TOTAL	MALE	FEMALE	CHILD	TOTAL	MALE	FEMALE	CHILD	TOTAL
Moharram	109	97	24	230	512	281	56	849	490	314	80	884
Safar	164	131	10	305	529	380	91	1000	517	375	93	985
Rabi-1	240	134	17	391	544	307	55	906	549	289	74	912
Rabi-2	130	129	24	283	598	448	69	1115	613	406	76	1095
Gamadi-1	466	269	39	774	818	401	89	1108	609	319	100	1028
Gamadi-2	210	179	27	416	705	353	132	1190	535	218	105	856
Raggab	257	152	53	462	554	397	80	1031	988	289	217	921
Shahban	298	235	92	625	491	346	85	922	487	314	120	921
Ramadan	115	85	19	219	442	240	48	735	418	224	40	682
Shawal	241	161	24	426	515	260	59	834	437	299	96	832
Keida	155	216	37	408	532	355	59	946	507	315	85	907
Hegga	125	85	23	233	482	249	50	781	321	198	45	564
TOTAL:-	2510	1873	389	4712	6522	4022	873	11417	6469	3560	1131	11160

TABLE A

Psychiatric Hospital Annual First-Admission Rate for Affective Disorder Per Million Population.

Area	Year	Male	Female
England and Wales	1952	161	200
London	1949	98	196
New York State	1949	22	38

TABLE B

1970 Census Data

	Murray Hill	East Side
Percent white	92	93
Number of males	83,027	32,425
Number of females	101,543	46,447
Percent aged 20 to 70 years	74	75
Median age in years	41	40
Percent aged 21 and over	83	87
Percent single, never married	39	39
Percent married	44	44
Percent widowed	10	10
Percent divorced	7	6
Median school years completed for persons 25 years and over	13	14

TABLE C

East Side Catchment Area 1973-1974*

Type of Care	Affective Disorder					Totals
	Involuntary Melancholia	MDI** Manic	MDI Depressive	MDI Circulatory	Other Major Disorders	
Local Services	2	7	3	7	3	22
State Admissions	1	3	3	1		8
Total affective disorders	3	10	6	8	3	30

* Population 78,872; total admissions 775

** Manic-depressive illness

Estimated number of Manic Depressives = .5% .5% × 78,872 = 394

TABLE D

Murray Hill Catchment Area 1973-1974*

Type of Care	Affective Disorder					Totals
	Involuntary Melancholia	MDI** Manic	MDI Depressive	MDI Circulatory	Other Major Disorders	
Local Services	11	9	9	8	13	50
State Admissions	5	4	10	1		20
Total affective disorders	16	13	19	9	13	70

* Population 184,570; total admissions 4,580

** Manic-depressive illness

Estimated number of Manic Depressives = .5% .5% × 184,570 = 923

with lithium carbonate. The cost while in treatment was roughly one half of that prior to treatment. This saving is a very conservative estimate since many cost factors were not considered. Their rate per client was $720 per year for treatment in the affective disorder clinic.

The clinic model can also make optional use of professional personnel by the maximum utilization of paramedics. As I have previously stated this enables us to handle a large patient population quickly, cheaply, and safely. The traditional model of a patient-problem and psychiatrist has been shifted to patient well-care and rating teams with a supervisory psychiatrist. Our focus in the clinic is on the presence or absence of an affective episode. Little attempt is made by staff to deal with interpersonal or intrapsychic problems that many patients have, except as related to mood, although problems in living along with psychologic and family response to a psychotic episode are dealt with in limited supportive therapy administered by a social worker. Well care during the symptom-free periods have resulted in decreased psychiatric contact and increased emphasis on non-physician rating teams. The clinical effectiveness of this approach was demonstrated by a minimal hospitalization rate and no suicide attempts. With these advances in the treatment of depression over the last decade, we are now basically dealing with an outpatient illness.

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الموجـز

عيادة الليثيوم كوسيلة وقائية وعلاجية من مرض الهوس ـ والاكتئاب

(مدخل على أساس المنفعة والتكاليف)

تمثل الاضطرابات الوجدانية الأولية ٢ الى ٣٪ من الأمراض النفسية فى أى بلد من البلاد • ومنذ اكتشاف عقار الليثيم كوسيلة للوقاية والعلاج من مرض الهوس والاكتئاب ، بالاضافة الى اكتشاف مضادات الاكتئـــاب وبدء استخدامها على نطاق واسع ، منذ ذلك الحين تحسن الأمل فى الوقاية والعلاج من الاضطرابات الوجدانية عامة شريطة أن تصل هذه الاكتشافات الجديدة بكفاءة الى المجاميع المصابة باضطرابات العاطفة •

وتستخدم دراسات المنفعة والتكاليف لتحديد أنسب الوسائل للوصول بهذه العلاجات الى أعداد كبيرة من المرضى ، وقد تطورت عيادات الليثيوم بسرعة فى الولايات المتحدة لكى تأخذ مكانها كأسلوب فعال للوقاية والعلاج من الأمراض الوجدانية ، وقد بنيت فكرة هذه العيادات على أساس النظـير الطبى لأى عيادة متخصصة ، فهى تستخدم خبرات المستشار الطبى المتمرس، وخدمات أولئك الذين يعملون بباقى الحرف الطبية المعاونة ، ومقاييس التقويم، وأجهزة متابعة مستويات العقاقير فى الدم وذلك للوصول الى أسلوب آمن وفعال مع أقل التكاليف لرعاية عدد أكبر من المرضى المصابين بالاضطرابات الوجـدانية •

ABSTRAIT

La clinique du Lithium pour la Prévention des Troubles Maniaco-Dépressives. Une approche du coût et bénéfice.

A peu près 2-3% des maladies mentales dans une nation est vraisemblablement une certaine forme des troubles maniaco-depressives. Depuis la découverte du lithium pour le traitement et la prévention des troubles maniaco-dépressives et depuis la découverte et la propagation des drogues antidépressives, la perspective du traitement et de la prévention des troubles maniaco-depressives est devenue bonne pourvu que ces nouvelles découvertes puissent parvenir aux masses atteintes par les troubles de l'humeur. Des études sur le coût et le bénéfice ont été employées pour déterminer les moyens les plus efficaces pour atteindre ce grand nombre de malades par ces traîtements. Dans les Etats-Unis, il y a un modèle qui se develope rapidement, celui-ci est la clinique du lithium. Basée sur un modèle la clinique du lithium ou la clinique des troubles de l'humeur emploie un consultant expert, du personel paramédical des drogues moniteurs pour obtenir des soins raisonables, efficaces et moins chers pour un grand nombre de malades.