A COMMUNITY SUPPORT SYSTEM FOR
THE CHRONICALLY MENTALLY DISABLED
OF VANCOUVER ISLAND

by
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Abstract

The chronically mentally disabled need to be defined as a special needs group in order to receive the social and health services they require for community survival. Their needs can be identified by reviewing the relationships between chronic mental disability and schizophrenia, poor social margin, long term use of treatment facilities, and poor social and vocational functioning.

Before the 1950's, services to the chronic patient were provided mainly within the asylum system. Although some innovations in psychiatric services were developed earlier, these were directed to patient groups other than the chronically mentally disabled. This tradition of attention to other patient groups has influenced the community mental health movement of the last 25 years. This movement was expected to provide for the needs of the chronically disabled in the community as the mental hospitals were reduced in population.

Recognizing that community centered care of the former asylum populations is a technically feasible goal, the National Institute of Mental Health (N.I.M.H.) has proposed a model community system of services for this patient group. This model addresses their special needs, but its application requires a concerted and coordinated effort by several separate agencies. Recent changes in Canadian health care financing allows a realistic look at the American model.
This paper uses Vancouver Island, British Columbia, as a planning area for services to the chronically mentally disabled. The population of the area is 441,000. The mental health services available to these patients are reviewed in order to determine the extent of this availability. Criticisms of community services in other jurisdictions were found to be relevant in the planning region. Recommendations are made based on the model service system developed by N.I.M.H. A comparison of the costs of the existing services to chronic patients and the ideal system shows that the required improvements could be made with little extra cost.
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Introduction

Services to the chronically mentally ill have developed over time through several distinct phases. The current phase is characterized by concern for adequate community support services to patients who fifteen years ago would have been long-term residents of centralized mental hospitals. Additionally, the literature contains expressions of concern over the apparent fragmentation of existing services and the failure of any one agency to accept responsibility for this patient group. Although these writings have been international, there is evidence that British Columbia has generally followed patterns of service history for the mentally ill similar to that in Britain and the United States. There have been some differences in service development which have contributed to the local pattern of fragmentation and neglect. Awareness of some of these problems has resulted in several unpublished papers identifying serious deficiencies in the existing system. One of these papers (Cumming, 1972) has resulted in the development of a community clinical and aftercare service in Vancouver, with the specific mandate to care for the seriously and chronically mentally ill. There has not been a similar effort in the province since. While services in Vancouver meet some of the needs of the chronically ill, services in the rest of the province have been less responsive to the needs of this patient group.
There has not been a synthesis of evidence put forward regarding gaps in service for the chronically mentally ill for any major region of the Province. Such an attempt should be combined with recent knowledge of the needs and characteristics of this patient population and innovation service developments in other jurisdictions. Any service development in the local situation should be considered within the framework of an overall plan for meeting the service needs of the chronically ill. In the last few years there have been some attempts to synthesize recent literature into models of complete community care systems. These models have been developed on the experience in other jurisdictions and their applicability to the local situation should be examined in detail.

The scope of this paper will be to propose the key elements of a system of care for the chronically mentally ill and disabled for a specific region of the Province. The region selected for this paper is Vancouver Island where there has not been any significant service planning for the chronic patient.

Recommendations for a comprehensive community care system for a specific planning region must follow four basic steps:

a) definition of the population to be served, including their characteristics and numbers;

b) development of a planning model based on an assessment of current trends and available technology;
c) examination of the specific planning region and an assessment of existing services used by the identified population;

d) application of the model plan with recommendations to improve the existing service system.

Chapter 1 of this thesis works through several definitions of the terms, 'chronically mentally ill' and 'chronically mentally disabled', while drawing the distinction between the two. Also provided in the final definition is an outline of the patients' characteristics and needs. Chapter 2 reviews some epidemiological literature with the objective of selecting appropriate prevalence rates of demand for service by the chronically mentally disabled. A chronological examination of service developments for the mentally ill shows how the disabled group have become a recent concern. These developments in Chapter 3 are presented as general, or international trends, with the discussion concluding on the British Columbia situation. In Chapter 4, recent published and unpublished literature is examined to formulate a model plan of a system of services for the chronically mentally disabled. Chapter 5 focuses on the planning region, Vancouver Island, with an examination of existing mental health services and their utilization by the target population. A discussion of the adequacy of this region's services concludes this chapter. Chapter 6 proposes required services in order to bring the existing situation closer to the model system.
The services required are proposed both in functional and organizational terms. This final chapter concludes with a statement of the costs of the proposals.
Chapter 1

Defining the Chronically Mentally Disabled

An Administrative Definition

The literature of the last twenty years has relied on 'administrative' definitions which relate chronicity to a patient's contact with a service. Former widespread use of hospitals as primary care facilities is reflected in the use of the criterion 'duration of stay'. Sommer and Whitney (1961), Wing (1962), and Brown et al. (1966), among others, considered that mental illness was chronic if length of hospital stay was greater than two years. Brandon and Gruneberg (1966) and Hogarty (1971) regarded a one year stay indicative. The reduction from a two year to one year stay could be a reflection of the progressively shorter hospitalization period for all admissions throughout the 1960's.

As will be shown in the next chapter, hospital populations were being reduced as well, even in the face of a rising admission rate (Martin et al. 1976). Lamb et al. (1976), particularly noted a dramatic shift of formerly long-term patients from the hospitals to the community. Publications since the mid-sixties have recognized these trends. The phenomenon of rising hospital readmissions as a proportion of total admissions is reflected in the criteria of chronicity used by Kraft et al. (1968), i.e. two years continuous hospitalization or cumulative hospitalizations over several admissions. Smith (1974) considered readmissions alone as
indicative of a chronic state if the patient had one or two admissions a year. Eaton (1975) saw the necessity of looking at both duration of episode (length of hospitalization) and recurring episodes (number of hospitalizations). Todd (1976) used similar criteria of continuous hospitalization of three years, three readmissions, or fifteen years history of psychotic illness.

All of the above studies utilized hospital populations when discussing chronic patients. But as the role of the mental hospital has been changing significantly over the years, it is quite possible that chronically mentally ill persons do not use this type of facility as they might have perhaps fifteen years ago. Lamb and Geortzel (1977) hypothesized this situation and, by using other criteria, defined a chronic patient group and then looked for its hospital utilization patterns. These criteria were: being 18 to 64 years of age and in receipt of a social allowance disability pension for a period of 18 months because of a medically certified diagnosis of functional psychoses, i.e. schizophrenia and manic-depressive illness. Lamb and Geortzel found that 39 of their sample of 99 had no previous history of state hospitalization and that 63 persons had no hospitalization in the previous two years. As well, 23% of the sample were receiving no outpatient services, which is surprising as the severity of illness of the sample was confirmed through interviews. These results indicate that use of essentially administrative criteria would not adequately
describe the chronically mentally ill.

A Diagnostic Definition

Brown et al. (1966) stated that one-half of all patients in British mental hospitals were long-stay schizophrenics, i.e. over two years of hospitalization. These patients had accumulated from former decades when 35% to 70% of patients admitted with a diagnosis of schizophrenia had stayed indefinitely. Wing (1968) found that in the Camberwell area of London, England, 64% of the long-stay (i.e. less than two years) beds were occupied by schizophrenics versus 29% of the short and medium stay beds and only 13% of outpatient places. Kraft et al. (1967), reported from the Fort Logan Mental Health Centre that 14% of their admitted inpatients required a continuous stay of over two years and that 94% of these were schizophrenics. Schizophrenics not discharged within the first few months had a .5 probability of becoming chronic hospital patients. Kraft et al. (1968) unfortunately did not provide diagnosis for the chronic patients who were defined by two years or more cumulative hospital stay over several admissions: these patients accounted for 22% of all readmitted patients. However, Winston et al. (1977) did review the aftercare history of a sample of discharged hospital patients and found that schizophrenics were rehospitalized in larger numbers (34.6%) than other diagnostic categories (11.4%).

Many studies have used the diagnosis of functional psychoses, particularly schizophrenia, to define a chronic
population and, like Hogarty (1971), considered this group of illnesses as "usually chronic and refractory to traditional treatment". The use of this diagnostic criteria by Lamb and Geortzel (1977) has already been mentioned. Others who used the same criteria were Wing (1968), Wienman et al. (1970), Smith (1974), and Todd (1976).

Keith et al. (1976) gave additional support to the contention that schizophrenia is perhaps the most extensive and disabling chronic mental illness. They maintained that the literature reveals schizophrenics usually have longer stays as inpatients than do persons with other disorders, and that 62% of known schizophrenics require some form of inpatient service within any given year. Further they report that only 15% to 40% of persons with this disorder are able to function at average levels of daily living, accounting for the fact that 50% of economic production lost as a result of mental illness in the United States, is because of schizophrenia.

The use of diagnostic categories, such as schizophrenia, to define a chronic patient group, does not contribute to an understanding of the functional disabilities associated with these illnesses.

A Behavioural Definition

Another way of looking at chronicity is as a process or pattern of behaviour, as explained by Wing and Brown (1970) in their dynamic model of the psychopathology of psychosis.

Before the onset of illness the individual will have certain disabilities or disadvantages that will influence the
course of the illness. These are termed pre-morbid disabili-
ties and can include poor education, low intelligence, phy-
sical disability, lack of social position, and poor self-image.

A second level of disabilities occurs within the morbid
period. These are termed primary handicaps and reflect a
concept borrowed from general medicine, although in mental
illness, handicaps do not lend themselves to as reliable or
valid a measurement. Primary handicaps for schizophrenia
include the disorders of affect which sometimes are termed
negative symptoms. These are social withdrawal, flatness of
affect, poverty of speech, lack of initiative, under-activity,
and low level of motivation. Disorders of association or
florid symptoms are another category of primary handicaps
and include delusions, hallucinations, incoherent thought and
speech, over-activity, and other forms of odd behaviour.

The third level of disabilities seen in psychosis is
termied secondary handicaps, and is not considered to arise
directly out of the disease process but out of the patient's
own reaction to being ill and the reaction of others to the
illness.

While recognizing the overlapping nature of the three
levels of disability, Wing and Brown considered that the
chronic behaviour seen in mental hospitals was a display of
secondary handicaps, not the handicaps associated with the
morbid level of illness. They termed the chronic behaviour
pattern 'institutionalism', which was a logical behaviour
given the environment of the hospital and its lack of expec-
tations of the patient.
The basic idea that manifestations of mental illness were a function of the individual's interaction with his environment goes back as far as the philosophy of the moral treatment period. Notwithstanding the development of social psychiatry in the 1930's, the concept that much patient behaviour and illness was iatrogenic was not popularized until the publications of the open-door hospital policies in England, and Stanton and Swartz's classic, *The Mental Hospital* in 1954. Changes in administrative and clinical policies throughout the 1950's resulted in behaviour changes in many long-term patients which in turn led to a period of theory development as outlined by Zusman (1966).

Barton (1959) observed long-stay hospital patients and suggested that their personality characteristics were a recognizable syndrome which he termed "institutional neurosis". The syndrome was produced by the isolating effects of hospitalization and could be confused with the latter stages of schizophrenia. The differences would be apparent following a program of social rehabilitation designed to eradicate the effects of prolonged hospitalization. Sommer and Whitney (1961) described a similar syndrome termed "chronicity". This was thought to start before hospitalization when the patient was gradually removed from community roles as his behaviour became progressively problematical. Chronic behaviour following hospitalization was characterized by a passive dependency and total acceptance of hospital authority. The syndrome was a self-fulfilling prophecy as staff would expect
this behaviour from patients. Any patient hospitalized for a prolonged period was at risk of chronicity, particularly schizophrenics. Martin (1955) observed chronicity in other diagnostic classes and presumed other variables than the illness alone in its etiology. The factors he suggested which predispose chronicity were inadequate pre-morbid personality, unfavourable economic circumstances, and lack of interests and social relationships. A monograph by the American Public Health Association (1962) presented the chronic behaviour process as a "socially determined reaction pattern" of the patient to his environment's response to his illness. Termed, the "social breakdown syndrome", this reaction pattern consisted of withdrawal from social roles, loss of personal hygiene standards, and an increase in anger or hostility.

Ernest Gruenberg recognized the social breakdown syndrome as an understandable social behavioural response to others who are attempting to deal with the illness. The syndrome could be prevented if the patient was given a positive concept of his condition and a self-respecting role in his treatment (Gruenberg, 1967). Although the syndrome is present with many diagnostic categories it is particularly associated with the psychoses (Brandon and Gruenberg, 1966).

**Chronicity as Inadequate Social Roles**

Cumming (1963) described a syndrome of similar etiology to Gruenberg's, but emphasized not the clinical manifestations, but the social and economic manifestations. Data
that show a high concordance between unemployment, lack of job skills, and mental hospitalization are seen as evidence of the syndrome and, de facto, as symptoms of mental illness. Cumming saw the syndrome as an inadequate organization of the patient's skills for everyday community roles. Inadequate life skills, as they are sometimes labelled, are as much a chronic condition as apathy and annoying behaviour.

Many studies and reports have described chronically mentally ill populations by using social and demographic variables. These descriptive data support the contention that chronic patients perform inadequate, or at best, marginal social roles. The chronic populations in these studies have usually been selected by hospital utilization data, diagnosis, observed symptom patterns such as social breakdown syndrome, or a combination of these. Many of the social and demographic descriptions of chronic patient groups seem to follow from the process of chronicity as hypothesized in the social breakdown and inadequacy syndrome concepts. The progressive social withdrawal and loss of life-skills in this group are seen as permeating the process of pre-morbid deterioration, the treatment phases, and aftercare. The state of pre-morbid adjustment, i.e. ego-strength and social attachment, can be a mediating variable affecting the nature and extent of the secondary disability period of illness in the chronic patient (Segal et al., 1977).

Chronic patients have almost consistently been described as being de-socialized (Kraft et al., 1967), socially disabled
(Brown et al., 1966), and socially withdrawn (Wing and Brown, 1970). This is interpreted as meaning that there are few social supports such as friends (Wienman et al., 1970) or family (Rada, 1969). Social withdrawal can be partly due to socially inappropriate behaviour (Todd et al., 1976) or a diminished capacity for making social adjustments (Smith, 1974). There is a similarity between these findings and those of Lamb and Geortzel (1977) who, in the previously mentioned study, found that only 20% of their sample were married. Wing and Brown found that the divorce rate for their chronic patients was 3 to 4 times higher than that of the general population. Further evidence of marginal social attachment is given by Lamb and Geortzel who found that 61% of their sample had no social activities outside their residence and 56% had no structured activity such as employment, volunteer work, or home responsibilities.

Unemployment rates among chronic patients can be used as support for Hogarty's (1971) contention that chronic schizophrenics are overly represented in the lower socio-economic classes in society. Only 2% of Lamb and Geortzel's sample had full-time employment and 13% had part-time employment. Smith (1974) found that chronic patients, at the Fort Logan Mental Health Centre in Colorado, had emotional problems which "left them with long-term diminished capacity for interpersonal relationships, vocational adjustment, educational pursuits, and social interaction". The marginal community attachments of chronic patients, described by
Cumming (1963) and others, can be viewed as a manifestation of chronicity in the community, as can Wing's 'institutionalism' be viewed as a manifestation of chronicity in the hospital.

**Chronic Disability as a Definition of Special Needs**

The four previous headings together can be seen as best describing the chronic group, and includes the most disabling and serious characteristics of a number of persons within and without the service system. This group has needs; some logically follow from the previous definitions and others are referred to elsewhere in the literature.

It is apparent that the chronically mentally ill utilize psychiatric inpatient services to a large extent. This situation exists in spite of the persistent deinstitutionalization trend of the 1960's and early 1970's which, in part, was designed to inhibit inpatient admission of new clients (Bachrach, 1976). The readmission data presented suggest that some portion of the old long-stay patient group, i.e. in hospital before deinstitutionalization, requires periodic hospital services. The work of Kraft et al., (1967, 1968) suggests a gradual build-up of patients requiring continuous inpatient status. This trend has been verified by Todd (1976) who describes a 'new long-stay' group, which is largely schizophrenic. Lamb and Geortzel (1972) studied long-stay patients in California and concluded that there exists a 'hard-core' group of psychotics who will never
function outside of the hospital environment. They estimated that five beds per 100,000 population are required for this segment.

Discharged hospital patients need clinical aftercare services in the community in order to function at adequate levels and to prevent readmission; or at least to maximize the interval between readmission (Winston et al., 1977). The psychopathology model of schizophrenia previously presented mentions two classes of primary symptoms related to the direct disease process, i.e. negative and florid symptoms. Cumming (1977), although using different terminology, states that the two symptom patterns make up the 'bi-partite nature' of schizophrenia and act interdependently from each other on separate continuum.

Chemo-therapy has been instrumental in controlling the florid symptoms, and controlled stimulation and ego-strengthening therapies inhibit the withdrawal and low-motivation aspects of the negative symptoms (Greenblatt, 1975). These treatment interventions, among others, have been shown to be effective in controlling the disease process and in minimizing hospital utilization (Stein and Test, 1976).

In an unpublished paper, reported by Sheets (1976), Mechanic attempted to explain high readmission rates of chronic patients. He suggested that the high-risk group lacked material living supports, appropriate living skills, coping mechanisms and defenses against stress situations,
individual and social group supports, and sustained motivation. Chemo-therapy control of the flamboyant aspects of psychosis, and traditional psychotherapy, does little to assist the patients in acquiring the skills and supports he needs for community living (Cumming, 1977). The needs described by Mechanic are highly suggestive of the secondary disabilities of psychosis referred to by Wing and Brown. The secondary deterioration wrought from the long-term illness, whether termed social breakdown syndrome or inadequacy syndrome, requires a rehabilitation effort directed to it alone.

Chronic patients, whether in the community or hospital, have certain basic needs similar to those of the general population. Sheets (1976), recalling Cassell, the eminent epidemiologist, points out that any person has to fulfill certain psycho-emotional needs in order to buffer against physical and psychological stress. These are: security, affection, trust, intimacy, nurturance, belongingness, affiliation, and approval. These needs would usually be met through participation in a social support system encompassing primary and secondary reference groups.

The evidence presented by Lamb and Geortzel (1977), among others, demonstrates that many chronic patients do not adequately participate in basic social support systems. For practical purposes, it is difficult to consider the needs of the patient separately from those of the person. For illustration, one study reported that the decision for
hospitalization is more often based on the patient's social situation rather than his symptomatology (Ozarín, 1976). Additionally, other reports have found relationships between community tenure and type of living arrangement, employment, social situation, occurrence of bizarre behaviour, and the degree patients' families tolerate management problems (Paul and Lentz, 1977).

Judith Turner (1977), in a working paper based on a NIMH (National Institute of Mental Health) conference, listed the special needs of the chronically disabled. This list includes needs related to functional deficits, dependency needs identified by Stein et al. (1975), and basic human needs. These are:

"- Access to decent housing, nutrition, transportation, education, health service, income maintenance and recreation.

- A personal support system consisting of other people who care about them as individuals.

- A comprehensive evaluation of strengths and weaknesses, and an opportunity to participate in setting goals and developing a plan for appropriate services.

- Appropriate and continuing medical and psychiatric-psychological treatment as necessary, including periodic review and regulation of medication.

- A place to go or a person to call for help in dealing with acute behavioral, emotional, or physical distress.

- Training in "coping skills" to assist the client in tasks of daily living, and, when appropriate, assistance in performing these tasks.

- A dependable resource person to whom to turn when assistance is needed or a crisis arises, who will protect the client from exploitation, represent the client as necessary, and espouse the client's cause in necessary contacts with service agencies.
- Opportunities for validation of personal worth, for being appreciated and valued as a human being.

- A residential setting which provides reasonable safety, emotional support, assistance in daily living, and which resembles other community living arrangements as nearly as possible.

- Assistance to family and significant others in relation to any difficulties they may experience as a result of the client's presence in their midst.

- Assistance to neighbors and employers in coping appropriately with any unusual, annoying or disturbing aspects of the client's behavior.

- Vocational guidance, training and assistance in securing and holding a job.

- Provision of work or other useful daily activities for those individuals who are incapable of holding a regular job.

- Assistance in obtaining and making appropriate use of entitlements as citizens or residents of their respective communities.

- A clearly defined and accessible grievance procedure.

Summary

Up to this point the terms "chronically mentally ill" and "chronically mentally disabled" have been used interchangeably. Partly this is due to a lack of clear distinctions in the literature. This inconsistency has been noted by Nagi (1966). An attempt has been made in this chapter to distinguish between the acute pathology or disease process of schizophrenia and its long-term behavioural, social, and functional effects. These latter effects of the disease are referred to as disabilities. The literature
supports a high correlation between patients diagnosed as schizophrenics and the prevalence of chronic disabilities resulting from mental illnesses.

The chronically disabled will have periodic episodes of acute illness requiring intensive clinical services, usually in an inpatient setting. During these episodes the patient will exhibit an exacerbation of Wing and Brown's disorders of association or florid symptoms, which may also be associated with disorders of affect. Treatment will focus on a reduction of these symptoms primarily with the use of psychoactive drugs. Chemotherapy will continue for an extended period subsequent to the acute phase. These aspects of chronic mental disorder, referred to as illness, may be adequately defined by the administrative or diagnostic definitions.

The behavioural and social definitions of chronicity pertain to the disabling side of chronic mental illness. The disabling process, evidenced by what Segal et al. refer to as "poor social margin", is continued through lack of social skills, time-structuring and coping mechanisms. Although the illness and disabling aspects of the chronic disorder have to be separately dealt with by a service system, they cannot be considered independent of each other. The literature strongly suggests that mental health systems which fail to meet the needs of the disabled will inevitably result in an over-utilization of the services designed to
treat the illness. The following chapter will identify the failure of existing systems to meet the needs of the chronically disabled. In Chapter 4, a model system is presented which is designed to overcome the deficiencies of most existing systems.
Chapter 2

Prevalence of the Chronically Mentally Disabled

As the objective of this paper is to propose a plan of community services for the chronically disabled, estimates of expected utilization must be prepared. Utilization can be estimated once the prevalence of disabling mental illness is determined. This chapter contains a review of some epidemiological literature that will provide prevalence rates that can be applied to the Vancouver Island population. As seen below, care must be exercised in selecting appropriate rates as they vary depending on the source and methodology of data collection.

Sources of Prevalence Data

1. Treatment Facilities

Some earlier studies used the first admission rates to public mental hospitals as a method of calculating incidence and prevalence, but these are unreliable without specific information on what forces bring the sick into the hospital (Richman, 1970). Goldhammer and Marshall (1953) also looked at first admissions, but included all inpatient facilities, including private sanatoria and general hospitals. The rates from these sources are actually patient prevalence rates. As care for the mentally ill was shifting from hospital to community in the 1950's, the hospitals as a source of data were becoming inadequate (Kramer et al., 1972).
Hollingshead and Redlich (1958) attempted to overcome this by surveying all treatment facilities, including private practitioners and outpatient services. Surveys of community treatment services expand the definition of patient in estimating rates of mental disorder, but still assume that all the mentally ill will enter care.

2. Psychiatric Case Registers

Richman (1970) defined psychiatric case registers as "systems whereby records from a specified set of psychiatric facilities are collected for individual persons from a defined population and accumulated over time". They are designed to record the history of admissions, discharges, and duration of stay over the lifetimes of a group of unduplicated individuals. Although based on a specified population usually defined geographically, there are still problems of migration and comprehensiveness of reporting. For example, the Rochester Register in Monroe County, New York, is the only one in the United States that includes reporting from private psychiatrists (Babigian, 1976). Although case registers have been used extensively (Bahn et al., 1966; Wing et al., 1967) in reporting cross-national rates of mental illness, they do have some disadvantages. There is still a discrepancy between true morbidity and that which is reported, even though a more comprehensive reporting is available. Comparison between areas is sometimes difficult for there will exist varying interpretations of diagnostic classification as investigated by Cooper (1970) between the United
States and England. Also the paths that determine the extent of patient contacts will vary (Bahn, 1966). Case registers do, however, provide the best recording of patient contacts.

3. Field Surveys

Field surveys are an attempt to measure true morbidity providing point and period prevalence rates. Incidence rates are rarely forthcoming from field data (Dohrenwend and Dohrenwend, 1969). Some of the recent major studies have been reported by Leighton et al. (1959, 1963) in Nova Scotia, Srole (1962) in Manhattan, and Ryan (1969) in Boston. Investigators typically select a definable community and with a representative sample or an entire population, interview directly or seek data from informants. The information is assessed according to a set of predetermined criteria to define cases which are usually categorized from "least" to "most severely disordered". In this manner both treated and untreated cases, as defined by the investigators, are counted in morbidity rates.

Dohrenwend and Dohrenwend (1969) reviewed 44 field studies and found that the "short-term" period prevalence rates for psychological disorder ranged from a reported 1% to over 60%. The rate existed in both urban and rural studies and in North American, European, and Asian. These rates, with their emphasis on global categories of disease, are unreliable and almost useless for planning purposes (Mechanic, 1970).
There is another issue to be considered in using prevalence rates from the three sources described above. Should services be planned on the basis of morbidity estimates from field surveys or from reports of existing utilization patterns? Ryan (1964), in Boston, demonstrated that few people in his category of 'seriously impaired' were actually in contact with any kind of mental health service. Also, the high rates of serious disorder found in Stirling County by Leighton suggests that a service system should be designed on the basis of true rates -- yet there is hesitation to do so.

Dohrenwend (1970), in the New York borough of Washington Heights, supervised psychiatrists conducting personal interviews with a large sample of the general population. They interviewed both treated and untreated cases and, as in other studies, found seriously disturbed individuals in each group. But they also found, that for many, the symptom patterns between the untreated and treated seriously disturbed were not the same. Dohrenwend reviewed results of some other prevalence studies and predicted that their morbidity rates could be reduced. Dohrenwend suggests a partial explanation for an important query, i.e. whether untreated and treated cases of the same disorder are fundamentally different. He does concede that his explanation does not obviate the general finding that the actual morbidity of serious mental illness is greater than reported.
Another interpretation of these findings is that epidemiologists may be reporting differences between need and demand. Rates of treated disorders are obvious measures of the latter, while true rates, using measurement criteria developed by health professionals, are estimates of need as they define it. Policy makers and funding bodies may not agree that services be provided to meet all needs defined in this way.

The remainder of this chapter will follow Mechanic's (1970) advice that for planning, limited categories of illness should be considered. These diagnostic categories will be derived from case registers as they provide the basis for estimating utilization from demand. A comparison of these rates will be made to rates from field studies.

Estimates of Chronic Mental Illness

As presented in a previous chapter, a paper concerned with the chronically mentally disabled is mainly concerned with the psychoses, particularly the schizophrenias. The organic psychoses, such as those associated with dementia, make up a significant proportion of the long-term disabled. These conditions, however, are qualitatively different than the other psychoses (Mechanic, 1969) and present unique problems for management. Service to this group deserves special and separate attention, and would not be justifiably served in a paper devoted to other major disabilities; therefore they are excluded from the discussion in this thesis.
Rates from Case Register Data

Wing et al. (1967) compared the one year prevalence figures of "schizophrenia, manic depressive and other functional psychoses" from the case registers of Baltimore, Camberwell and Aberdeen. These rates are summarized in Table 2.1.

Table 2.1

One Year Prevalence Rates for Selected Disorders in Three Register Areas

(Rates per 100,000 population aged 15+)

<table>
<thead>
<tr>
<th></th>
<th>Baltimore</th>
<th>Camberwell</th>
<th>Aberdeen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>685</td>
<td>435</td>
<td>246</td>
</tr>
<tr>
<td>Manic Depressive and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Functional Psychoses</td>
<td>135</td>
<td>377</td>
<td>225</td>
</tr>
<tr>
<td>Total Prevalence Rate</td>
<td>820</td>
<td>812</td>
<td>471</td>
</tr>
</tbody>
</table>

The low rate in Aberdeen can be explained by Wing's description of the three cities. Aberdeen, unlike the others, is a smaller city with little major socio-economic class differences, virtually no slums or urban blight. These conditions are significant in explaining variance in reported rates of serious mental disorder (Rosenberg and Raynes, 1976). The lower schizophrenia and higher manic-depressive rates in Britain, as compared to Baltimore, reflects differing diagnostic practices of psychiatrists and true morbidity differences (Cooper, 1970). Application of the Baltimore rate for schizophrenia to the 1976 Vancouver Island population over 15 years of age, i.e. 340,530, would indicate a one year patient prevalence of 2332 persons.
There is hesitation to accept crude rates realizing the impact of age and sex on the distribution of mental illness.

Looking at only United States studies, Babigian (1976) reported that the one year prevalence for schizophrenia was between .23% and .47% of the total population. The higher figure was derived from the Monroe County Case Register in New York State. Table 2.2 shows the age and sex specific rates for schizophrenia, from the Monroe County Register, as applied to the Vancouver Island population. This table uses only the Monroe County rates for whites so to make application representative racially. Monroe County is an area of mixed economy with some rural areas, similar to many sections of Vancouver Island.

Table 2.2

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male Pop.</th>
<th>Male Rate</th>
<th>Male Cases</th>
<th>Female Pop.</th>
<th>Female Rate</th>
<th>Female Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>41,455</td>
<td>699</td>
<td>277</td>
<td>40,590</td>
<td>411</td>
<td>167</td>
</tr>
<tr>
<td>25-34</td>
<td>33,910</td>
<td>874</td>
<td>296</td>
<td>31,970</td>
<td>913</td>
<td>292</td>
</tr>
<tr>
<td>35-44</td>
<td>23,440</td>
<td>930</td>
<td>218</td>
<td>22,155</td>
<td>1144</td>
<td>253</td>
</tr>
<tr>
<td>45-54</td>
<td>23,550</td>
<td>616</td>
<td>145</td>
<td>24,860</td>
<td>753</td>
<td>187</td>
</tr>
<tr>
<td>55-65</td>
<td>21,170</td>
<td>275</td>
<td>58</td>
<td>24,465</td>
<td>445</td>
<td>67</td>
</tr>
<tr>
<td>65+</td>
<td>23,290</td>
<td>63</td>
<td>15</td>
<td>29,685</td>
<td>113</td>
<td>34</td>
</tr>
<tr>
<td>Totals</td>
<td>166,805</td>
<td>1009</td>
<td></td>
<td>173,725</td>
<td>1000</td>
<td></td>
</tr>
</tbody>
</table>
The Monroe County rates provide one year patient prevalence and count only those schizophrenics who came into service in that period of time. The rates do not account for all the schizophrenics in the population as some would have received service the previous year or not at all. It is interesting to note the age distribution in the Monroe County rates. There is a negligible rate for the older groups, perhaps reflecting an inability of the service system to treat them and consequent lack of demand.

Babigian also reported that some American studies quoted one year incidence rates of schizophrenia between .043% and .069% of the total population. These rates, applied to the Vancouver Island population, would suggest that there are 189 and 304 new cases of schizophrenia annually. According to the formula,

\[
\text{Duration} = \frac{\text{Prevalence}}{\text{Incidence}},
\]

the duration of schizophrenia is between 7 and 12 years. This should be interpreted carefully; i.e. this is the length of time a schizophrenic may seek active treatment, since the rates are derived from patient prevalence data.

**Rates from Field Surveys**

Dohrenwend and Dohrenwend (1969) reviewed 44 international prevalence studies completed over a thirty year period. These field studies took period measures of short duration -- interpreted as one to three years -- for all psychological disorders. The Dohrenwends extracted where
possible the rates for psychosis, i.e. schizophrenia and other functional psychoses. Table 2.3 shows the distribution of thirteen prevalence studies by percent of population found with psychotic disorders. The male and female rates of the studies are separated.

Table 2.3

Prevalence Rates of Psychosis from Field Surveys

<table>
<thead>
<tr>
<th>% Rate Reported</th>
<th>No. of Studies Reporting this Rate:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>for Males</td>
<td>for Females</td>
</tr>
<tr>
<td>.23% - .50</td>
<td></td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>.51 - .75</td>
<td></td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>.76 - 1.2</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The narrow range of rates reported and the similarity of these results to those from case register data is noteworthy. While acknowledging difficulties mentioned above in interpreting prevalence figures from field studies, it may be safe to state that the true prevalence of the major psychosis, is within 50% of the reported rate. Compared to the variability found in studies reporting all psychological disorder, the difference between reported and true prevalence of psychosis is quite small. The narrow range would support the contention of Goldhammer and Marshall (1953), and Mechanic (1969) that true morbidity of serious psychosis has not significantly changed over time and is essentially the same between Western societies. Additionally, Rosenberg and Raynes (1976) proposed that the concept of psychotic disorder has not been significantly expanding in
contrast to expanding concepts of other psychological disorder.

Oedegaard (1952) argued that of all psychological disorders, the psychoses, and particularly schizophrenia, will show up in hospitalization rates eventually. He recognized that investigators for field surveys have shown 25 to 30 per cent more non-hospitalized psychotics than admission statistics, but he concluded most of these would seek treatment within one or two years of onset.

Summary

There has been sufficient evidence presented in Chapter 1 to suggest that a prevalence estimate of schizophrenia approximates that of chronic mental disability, other than those associated with organic psychoses. The prevalence of schizophrenia can be best estimated from psychiatric case registers, which reflect existing demand for treatment services. An important variable to be considered is case definition, as diagnosing practices vary between case register areas. This variance will be accounted for in Chapter 5 where the estimates of actual prevalence for the different areas of the planning region, i.e. Vancouver Island, will be presented.
Chapter 3

Service Trends and Issues

A. General Trends and Issues

The Asylum Period

Before the eighteenth century most of the mentally ill lived in the community suffering poverty, indenture and ridicule. Treatment services as we know them were non-existent although a very few asylums existed such as Bethlehem Hospital in London. The solution for the many indigent 'lunatics' was conceived of in institutional terms as they were lumped with the poor and the chronically sick under the Elizabethan Poor Laws which required communities to house paupers in almshouses and workhouses. Some of these facilities came to house predominantly the mentally ill. Central government regulation of these institutions was felt necessary in England by 1774 with the Act Regulating Madhouses. By this time the institutional model was firmly established throughout Europe and had been transplanted to North America in 1773 at Williamsburg, Virginia (Mora, 1976).

Mora stated that the growth of institutional care coincided with the abandonment of moral ideas of the cause of illness such as possession, witchcraft and sin, and the rise of modern medicine from the period of William Harvey onward. By the mid-eighteenth century a small group of physicians pre-occupied with the workings of the mind were working within asylums.
Some of these physicians were identified with the "moral treatment" period which began in the 1790's at the Bicêtre in France and the York Retreat in England.

The approach of moral treatment was to increase the self-esteem and self-control of the afflicted through "the application of rationally determined rewards and punishments within the context of a trusting patient-doctor relationship" (Schneck, 1960). Bockover (1962), among others, held that moral treatment was the dominant mode of patient management in the early asylum period and a precursor of modern community psychiatry. However, as David Mechanic (1969) argued, moral treatment, although practiced internationally was not practiced universally, as very few patients were exposed to its approach and those who were, were more likely the affluent. The limited use of moral treatment and because it was not established on scientific principles, did little to ensure its survival in the scientific age. Additionally, the population pressures of the 19th century became predominant in shaping a custodial approach towards the mentally ill, and moral treatment was left at the wayside.

England responded to pressures for institutional care with the County Asylums Act (1808) which empowered local governments to construct institutions specifically for the insane. Eventual overcrowding and deteriorating conditions of the asylums contributed to a short-lived reform movement. In 1845, the Lunatic Asylums Act provided for inspectors and for a process of medical certification for commitment.
However, as Katheleen Jones (1960) has documented, there was a growing public fear of the insane and of wrongful committal. The result was the 1890 Lunacy Act which required a magistrate's order for all asylum admissions.

As a legislative attempt to protect the public, the Lunacy Act ensured the continuation of a custodial system of care. Citizens in a financial position to avoid asylums did so, using commitment only until absolutely necessary. The institutions came to be identified with the poor and hopelessly ill, and removed from social reform movement in other fields such as mental retardation and social welfare.

State governments in the United States responded to the campaigning efforts of Dorothea Dix (1802-1887), who lobbied state legislatures to build asylums for the indigent mentally ill. Her campaign laid the foundation for the extensive state asylum system which was the predominant mode of care until the 1950's. These asylums literally isolated the mentally ill from their communities as they were almost always built in rural areas. One reason was to allay the general public fear of dangerous behaviour and secondly, that it was beneficial to remove the afflicted from a stressful environment to a more peaceful, idyllic one.

Development of the knowledge and the profession of psychiatry contributed to the continuing isolation of the asylum from the mainstream of society. Psychiatry and related disciplines such as neurology attempted to keep pace with the tremendous advances being made in other medical
fields, particularly those based on biology. Interest grew in the somatic origins of mental illness to the detriment of environmental causes (Weston, 1976). The deterministic aspects of theories of evolution and heredity further influenced psychiatry in the latter decades of the 19th century. The result was a pessimistic prognosis for mental illness, which largely precluded consideration of alternatives of custodial care. For over two-thirds of those persons with serious mental illnesses, asylum committal usually meant life-long incarceration.

Many early psychiatrists, inhibited from expecting cures, became preoccupied with nosology and description of mental illness. Some of the classification schema developed in the late 19th and early 20th century has survived to the present relatively intact. Korsakov described alcohol psychosis and Kraepelin studied and named 'dementia procoex' which Blueler renamed schizophrenia. Illnesses such as these were accounting for a majority of asylum populations.

**Early Community Alternatives**

In order for alternatives to the asylum system to evolve it was necessary to broaden the explanation of mental illness. This was a long and uneven process that involved the interaction of medicine with other disciplines and schools of thought.

Freud's developmental theory of personality was the first methodological attempt to integrate the origin of
mental pathology within the context of total personality development. His work stressed that normality and pathology were on a continuum, thus allowing for a more flexible approach to mental disorder that lent itself to intervention strategies as an alternative to asylum committal. This approach had a lasting effect on the attitudes of professional groups working with the mentally ill (Mora, 1976).

Additionally, Freud's theories brought attention to the prevention of mental disorder through working with children. This was the start of the child guidance movement with psychologists as the main proponents, and with community clinics as their work settings. These clinics set a pattern for experimentation for adult outpatient clinic services (Ridenour, 1961) which first appeared between 1900 and 1910, initially providing hospital admission, screening, and aftercare. However, many of these clinics came to serve new types of clients and not those who were being admitted to the mental hospitals.

Another important line of development for alternative services were the smaller "psychopathic" hospitals located in the community with active treatment rather than custodial functions. The first such unit opened in 1902 in Albany, New York, and the first unit affiliated with a university opened four years later in Michigan. Several such university affiliated units followed, resulting in further interaction of psychiatry with other professional and academic
groups. One such professional group was social work, which first secured a position in psychiatry at the Boston Psychopathic Hospital in 1909 (Ewalt and Ewalt, 1969). A mental hospital in Maryland established the first aftercare department in 1912 with a psychiatrist and social worker. The inclusion of social work in psychiatric services was permanently recognized by 1920 when Smith College established "psychiatric social worker" training (Rossi, 1962). These innovations, however, did not significantly affect the continued growth of the asylum system until much later.

Ewalt and Ewalt (1969) largely credit the union of psychiatry with the social sciences to the efforts of Harry Stack Sullivan (1892-1947), who with social scientists such as Lawrence Frank, Harold Lasswell, and Edward Sapir worked through the 1930's to develop a definition of psychiatry in relation to interpersonal relations. Sullivan (1947, 1949) claimed this approach was founded on the view of man as a social being with mental pathology a product of biological, psychological and social factors. This increased emphasis on social factors gave rise to the term "social psychiatry". Sullivan additionally saw psychotherapy in schizophrenia, a disease responsible for many asylum admissions, as an attempt to correct faulty communication processes. This would be accomplished in a hospital as the primary treatment facility, although aftercare or home treatment was more suitable for later stages of therapy. Clinical management
of serious disorders was now conceived as being partially possible outside the traditional asylum environment.

Social psychiatry up to the 1940's held potential for new attitudes to be introduced into patient care. This did not occur immediately, for, in America, at least, the early fusion between psychiatry and the social sciences was characterized by the utilization of psychoanalytic concepts in social science research (Dunham, 1955). It was not until the sociologists examined the traditional theatre of psychiatry - the asylums - that perspectives of treatment began to change (Greenblatt et al., 1955). These early studies focused on the hospital power and social structures, and the ward social environment; both of which influence patient care.

An important influence was the introduction of chlorpromazine, reserpine, and other psychoactive drugs into the state hospitals, beginning in New York in 1955. Brill and Patton (1962) reported that almost immediately the mental hospital population and length of stay started to decline, although the number of admissions continued to rise. There has been some disclaimers (Baldwin, 1963) of the importance given to psychoactive drugs in reversing mental hospital census in the 1960's as Greenblatt et al. (1955) reported that the social milieu therapies were reducing length of stay at Boston Psychopathic Hospital by the late 1940's.

Whatever the relative importance of the new chemotherapies, the various developments in this period brought
attention to the realistic opportunities of maintaining the seriously mentally ill in their own communities. Greenblatt, Levison and Williams (1957) reported on the rehabilitation possibilities of psychotics utilizing hospital and community programs. The Massachusetts Mental Health Centre in 1957 experimented with emergency services for outpatients in lieu of hospitalization. Harry Solomon (1958) was calling for the abolition of the state hospitals as alternative services were showing hopeful possibilities of caring for the long-term mentally ill.

There were important developments taking place outside the United States. Some of these included structural reforms in care systems and developments in service technology. Holland had developed a comprehensive psychiatric service within its public medical insurance system by 1936 which included hostels and twenty-four hour emergency services for the mentally ill in local communities. The English Mental Treatment Act (1930) provided for local authorities to establish outpatient clinics for early diagnosis and treatment. More importantly this legislation incorporated the concept of voluntary admission which was an early attempt to make psychiatric care available on the same basis as other medical care. This policy was made explicit in the 1939 Mental Treatment Act which also furthered the expansion of the community services necessary to fulfill the concept. The National Health Services Act (1946) placed all mental health facilities under newly created regional boards,
thus in the next twenty years bringing about an integration with other health services still not achieved in North America. McKerracher (1966) reported that this integration brought marked improvement in hospital and community services for the mentally ill.

Communication of these and similar efforts were enhanced by annual conferences and publications sponsored by the Millbank Memorial Fund starting in 1949. Interest grew in such alternatives as partial hospitalization, the first day hospital being reported in Moscow in 1933. North America's first was the Day Hospital at Allen Memorial Hospital in Montreal (Cameron, 1947).

**Community Mental Health Programs**

Directed by Congressional Legislation in 1955, the National Institute of Mental Health selected a commission to "analyze and evaluate the needs and resources of the mentally ill . . . and make recommendations for a national mental health program". (Joint Commission, 1961). The Joint Commission for Mental Illness and Health published its summary report and recommendations in Action for Mental Health (1961), and recognized that "major mental illness is the core problem" and that patients in this category "should have first call on . . . the mental health professions" in "various treatment facilities". These facilities included Community Mental Health Clinics to be "... a main line of defense in reducing the need . . . for prolonged and repeated hospitalization". "A national mental health program should set as
its objective one fully staffed, full time mental health clinic available to each 50,000 of population." Every community general hospital over 100 beds should provide "a psychiatric unit or beds", and state hospitals under 1000 beds "should be converted as rapidly as possible into intensive treatment centres for patients with major mental illness in the acute stages". All larger state hospitals, it was recommended, should be "converted into centres for the long-term and combined care of chronic diseases, including mental illness. Known techniques of rehabilitation, socialization, group living and relearning should be applied to the chronically ill in these institutions". These techniques, it was stated, should be offered to all patients of major mental illnesses in the community through the medium of various "day or night hospitals, aftercare clinics, public health nursing services, foster family care, convalescent nursing homes, rehabilitation centres, work services and ex-patient groups".

The American Congress passed The Community Mental Health Centres Act of 1963, which authorized up to two-thirds federal financing of community mental health centres. Federal money was available contingent to the mental health centre providing five basic services: inpatient services, outpatient services, partial hospitalization, 24-hour emergency services and consultation and education for community agencies and personnel. Five optional services were recommended: diagnostic services, rehabilitation (including vocational and
educational programs), precare and aftercare (including housing), training, research and evaluation (Cumming, 1974). Later events showed the weakness in community care for the chronic patient by placing these latter services on recommended status.

While the growth of interest in community mental health service programs since 1963 has been accompanied by much support; there has been some criticism. Some critics have spoken against the general trend as seen in Arnoff (1975) and reflects a backlash against the deinstitutionalization movement of the latter 1960's and early 1970's. Most Canadian provinces and American states decreased their asylum populations by over fifty percent without planning for community residential alternatives. A mental health service consumer (Allen, 1974) in California and a psychiatrist in Montreal (Murphy, 1972) deplored the care ex-hospital patients were receiving in community boarding homes, particularly the lack of resocialization and rehabilitation programs. Mechanic (1969) also pointed out that the care of seriously ill patients in the community was placing increasing burden on the families. Arnoff (1975) argued that this was a social cost largely ignored by supporters of community care.

Criticism such as that of Mechanic and Murphy was directed at specific shortcomings of the community mental health movement. Mechanic observed that the ideology of this movement has spread faster than the services required for its adequate implementation. He claimed that
community services were provided to patients on a sporadic and fragmentary basis. Chu and Trotter (1974), Cumming (1975), and others revealed that the chronic seriously mentally ill were not being given adequate service in the community for professionals were disposed to treating the more attractive non-serious cases where positive results of intervention could be recognized in a finite time period.

Criticism appears to be focused on various aspects of community centered services intended for the more chronically seriously ill, such as the schizophrenic. Are the modes of community treatment for this group as effective as hospital care? Gottesfield (1975) and Townsend (1977) reviewed the literature on this question and concluded that when community programs were coordinated and objectives specified, community alternatives were more effective than hospital programs in preparing long-term patients for living in the community. The recurring themes of coordination and continuity of service, and clear objectives for community programs is echoed in Feldman (1973), Cumming (1974) and others.

Bachrach (1976), summarizing Bertram Brown, saw as an ideal system one which is coordinated to prevent hospital admissions; to resocialize existing hospitalized patients; and which develops community support systems for non-hospital patients. Turner (1976) and Sheets (1977) have proposed a full range of components for a community support system. These components meet basic needs of shelter, food, social support and meaningful activity, as well as the need for
medical and psychiatric services. The work of Turner and others will be used to develop a model of care later in this paper.

The systems approach, perhaps most thoroughly developed by Gerhard and Miles in the *Balanced Service System* (1977), encompasses the ingredients of inpatient and outpatient programs as well as coordination with other health and social services in the community. The concept of an integrated services approach to meeting the needs of the chronically ill could possibly be seen as part of the community mental health movement, but Sheets saw it as a further stage in evolution, calling it the "fourth revolution in psychiatry". The third revolution was the community mental health movement with its emphasis on improving the mental health of a given geographic catchment area. Borus (1978) recently focused attention on the criticism that this movement has tried to be "all things to all people and has embarrassed the mental health professions by becoming involved in areas where it has no expertise", while "avoiding the difficult task of providing the therapeutic services necessary to maintain severely ill and disabled psychotic patients in the community". Borus warned that the funding restrictions in the mid-seventies on community mental health would continue unless the movement established credibility with the public and the politicians.

The work of Sheets, Turner, Gerhard and Miles seems to be an attempt to rescue the community movement by shoring up its weakest front. If adequate support systems for the
severely ill and disabled were developed, then some degree of credibility would be attained. Community mental health may or may not be rescued by the "fourth revolution in psychiatry". Its value will be its ability to properly pick up where the deinstitutionalization movement left off. It has been seen how the severely mentally ill have been dealt with for over two hundred years. Incarceration and custodial care has slowly given way to other models of intervention and treatment which view long-term hospitalization as undesirable and unnecessary. While undoubtedly more humane, this view has resulted in the neglect of many basic needs of patients formerly institutionalized.

B. **Canadian and British Columbia Service Trends and Issues**

The Canadian experience with services to the chronically mentally disabled has been similar to the general trends discussed earlier, but with a few important variations.

In the early 1900's, service providers were familiar with early community services such as psychopathic hospitals and child guidance clinics. These services were recommended for British Columbia in 1920 in a report by the National Committee for Mental Hygiene. This report made the distinction between acute and chronic mental "disease". Acute conditions were considered to be best treated in a psychopathic section of a general hospital with ongoing care provided in a convalescent home so as to avoid lengthy hospitalization. The authors recognized the difficulty in treating patients recovering from
mental disease in an asylum. There was little mention, however, of what to do with patients already institutionalized other than providing humane conditions. Unfortunately, the idea presented in this report of preventing chronicity did not have any effect on the system of care as the provincial government continued to expand the mental hospital.

Institutional care was the dominant mode of meeting the problem of chronic patients and was reiterated at a 1952 Montreal conference entitled "Meeting the Needs of the Chronically Ill". Dr. D. G. McKerracher, Director of Psychiatric Services in Saskatchewan was reported as stating: "the objectives of the programs, as far as the chronics are concerned, are primarily good nursing care and suitable occupation and recreation". Dr. McKerracher stated that 4000 of 4500 patients in the province's institutions were considered to be chronically ill. These patients were housed in institutions with a capacity of 2900 beds.

The B.C. contribution to this conference did not even mention the chronic mentally ill other than to say the government had responsibility for them. The emphasis at the conference was on medical illnesses; an emphasis which appears in most publications on the chronic patient.

Mental illness has usually attracted secondary attention. The B.C. government reflected this view in a position paper to the 1957 federal-provincial conference on hospital
insurance. Entitled *Proposed New Chronic Treatment and Convalescent Coverage Programme*, the position paper explained benefits that should be available to the chronically ill excluding those persons with "tuberculosis, mental disease or alcoholism". This position was consistent with British Columbia's position in respect to its 1949 hospital insurance program which provided coverage for all except those with "nervous, mental conditions, and tuberculosis which have gone beyond the acute stage". Particularly, "persons receiving treatment in a Provincial mental institution" were not covered under the program, as these were the responsibility of the Provincial Secretary and not the Health Department.

The result of the above policy decisions and similar ones in respect to federal hospital insurance, was two systems of psychiatric inpatient care with a widening gap of resources available to each. The Hospital Insurance and Diagnostic Services Act (1957) excluded the provincial mental hospitals from receiving the fifty per cent cost-sharing available to general hospitals. This was a mixed blessing as the Act encouraged the development of acute psychiatric treatment units in general hospitals (Taylor, 1978).

The general hospital psychiatric units performed the function of the psychopathic wards proposed in the 1920 report mentioned above. The units were available to patients with acute conditions and neurotic depressions, but not to those patients already in the mental hospitals.
It was not until the mid-1970's, in British Columbia at least, that general hospital units were being utilized by many patients who would have entered the mental hospital in former years. This trend was not established until the provincial mental hospital, Riverview, had decreased its census from 3538 in 1959 to 1600 in 1974, and admissions from 2760 to 1724. Psychiatric beds in British Columbia's general hospitals increased from 107 to over 400 in the same period. The effect of national hospital insurance is evident in these figures.

During the period of the Joint Commission on Mental Illness in the United States there was a major review of psychiatric services in Canada, sponsored by the Canadian Mental Health Association. The final report, *More for the Mind* appeared in 1963, the year of the Community Mental Health Centre legislation in the United States. While both the American and Canadian reviews attempted to seek solutions to similar problems -- poor coordination of existing services, difficulty in establishing new community services, and large asylum populations -- the proposals were fundamentally different. The American federal government, with direct grants, established a new service system.

The Canadian authors of *More for the Mind*, all physicians, proposed an extension of psychiatric services from the general hospitals. These services would include care from non-medical professionals, convalescent care, and rehabilitation, and would be included in any national health insurance scheme. This message was given to the Hall Royal
Commission which was considering, among other matters, medical insurance.

The National Medical Care Insurance Act (1966) had two major effects on psychiatric services. First, there was the associated decision to phase out the National Health Grants Program of 1948 which had provided the only federal funds to provincial mental health programs. Secondly, medical services, including those of private psychiatrists, were available to all citizens. This had the effect of increasing needed physician manpower. Yet the proposal of *More for the Mind*, i.e. that non-medical professional services be included in the health insurance scheme, was not accepted. Multi-professional approaches to mental illness were not encouraged within the medical care system unless the patient was within the boundaries of the general hospital.

Community mental health services joined the mental hospitals as being set apart from the insured, and federally cost-shared, medical system. Most provinces responded to this situation by expanding the mental health centre model of service, of which a limited number were in place before the mid-sixties. The mental health centres had to compete at a disadvantage with cost-shared health services for provincial funds. British Columbia, however, was able to establish 30 centres by 1978.

A second major public insurance measure in the 1960's had an effect on services for the chronically disabled. The
Canada Assistance Act (1966) allowed the federal government to cost-share provincial social welfare programs. These included income assistance, child welfare, and social rehabilitation programs. Under the latter emerged social centres and sheltered workshops for marginal groups such as the disadvantaged, mentally retarded, and the physically disabled. Subsidies for the care of the indigent and the chronically ill and disabled in boarding homes were also eligible for federal funds. The Canada Assistance Plan (CAP), i.e. the administrative arm of the Act, was intended for "persons in need". Need was defined as financial need, thus many of the mentally disabled were automatically eligible for the cost-shared services and a few were developed for them. Some services were developed by voluntary associations with grants received from provincial welfare departments.

Only provincial welfare departments had authority to receive the CAP cost-sharing. Hence the community boarding homes, programs which assisted deinstitutionalization, and social centres for the mentally disabled were developed outside of the mental health departments. As a result, the system was further fragmented, although in B.C. an agreement was reached between the welfare and mental health departments to coordinate the administration of the boarding home placements from Riverview hospital. No inter-departmental agreement was established to coordinate the development of social rehabilitation services eligible for CAP cost-sharing.
The mental health centres established in British Columbia were similar in name only to those developed in the United States. They were not part of a federal program, as the involvement of the Canadian government in financing mental health programs since 1968 has been nonexistent. British Columbia mental health centres did not have the same comprehensive mandate to provide the 'five basic services', as most of these, such as inpatient care, day hospitals, and emergency services, were part of the cost-shared general hospital system.

Lack of centres' integration with the existing medical and hospital system resulted in their having difficulty in attracting psychiatrists, especially into the smaller communities. Medical insurance guaranteed referrals to psychiatrists' private practices. Not having an ability to perform a major medical treatment role, most centres established close working relationships with schools, social agencies, and welfare departments, in programs of prevention, consultation, and education.

Lacking clear legislative mandate, the mental health centres' operations have been guided by a series of memoranda developed by the provincial department responsible for their administration. Foulkes (1974) quoted from one departmental statement of 1967, which emphasized the centre's role to "'assume increased responsibility for the overall aspects of mental health planning... '". Another statement, dated 1970, states that "the Centre must give priority to the more serious mental, emotional and behavioural
problems. These include major chronic mental illness
...". A specific linkage of the two responsibilities, direct service and services planning, was also mentioned in the 1970 statement. This reflects recent American and Canadian literature which states that the agency with the responsibility for direct service to the chronically mentally ill should have an explicit mandate for the coordination of local services for these clients.

Recent internal policy statements (see appendices) of the department have greatly expanded the specific responsibilities of the centres to include: consultations to other agencies, community education, family counselling, and other services. Concurrently, the former explicit mandate to serve the persons with major chronic mental illness have been reduced to a "concern". This comes at a time when Riverview hospital has reduced its population by over one-half between 1970 and 1978. More of the seriously impaired patients are in the community than ever before.

In 1975, one effort was made to encourage the mental health centres to care for the chronically ill. Psychiatric nurses were placed in two-thirds of the centres with the specific responsibility of caring for this client group. The nurses have since reached their maximum caseloads without further positions being added. The review of the centres' caseloads, in Chapter 5, will demonstrate the limits of responsibility that centres have assumed for the chronically ill and disabled.
A model for a comprehensive community service for the disabled is presented in the next chapter. The model is borrowed from the National Institute of Mental Health in the United States where there are different financial structures. As discussed previously, Canadian mental health services have been at a disadvantage when competing with other medical and hospital services for provincial funds within the federal financial system. The American federal government can fund services directly, so plans, such as that outlined in the next chapter, are more realistic.

There has been, however, a recent change in Canadian financing of health and social services. First, the medical and hospital insurance plans were replaced in 1977 by the Established Programs Financing Act which transferred full funding responsibility to the Provinces. Cost-sharing was replaced by non-specific grants and increases in the amount of income taxes that provinces can raise for health services.

Secondly, changes in the Canada Assistance Plan allowed provincial health departments to administer cost-shared welfare programs. Under this arrangement the British Columbia health authorities presently administer and fund boarding homes. The health department, recently termed a Ministry, also has the potential of funding cost-shared social centres and sheltered work programs.

Comprehensive mental health programs for the disabled now have the capability of competing on the same terms as other health services since none are competing for cost-shared dollars.
Chapter 4

A Model Community Support System

Since the 1963 Community Mental Health Centre legislation there has been appearing an increasing volume of literature concerned with the development of community services for the chronically mentally disabled. Many descriptions of these services have been incorporated into subsequent American legislation. The preceding chapter listed some of these services as five additional basic services required to be in place before federal funding can be approved for a Community Mental Health Centre. The National Institute for Mental Health has gone a further step as outlined in several recent working papers. It has incorporated a system approach to providing services to the seriously mentally ill and chronically disabled, such as presented in the work of Gerhard and Miles, and Sheets.

A useful statement outlining the ideal community support system for the chronically mentally disabled is found in the previously mentioned paper by Judith Turner (1977). The service categories developed by Turner will be used in assessing the adequacy of similar services on Vancouver Island. Turner's paper groups the components of a comprehensive community support system under six headings:

a) Mental Health Services
b) Psychosocial Rehabilitation Services
c) Long-Term Support and Maintenance Services
d) Community Integration and Acceptance Strategies
e) Protection of Clients' Rights
f) Planning, Coordination, Case Management and Continuity of Care
These are presented below with supporting evidence from other literature and references to actual need estimates developed by others. Further need estimates, more appropriate to the local situation, are developed in Chapter 7.

It should be mentioned at this time that Turner's system is based on a number of basic guiding principles. These are paraphrased for the sake of brevity. A human service should be based on principles of personal dignity for the client and his right of self-determination in attaining his own goals. Services should be provided using culturally normative and valued methods, and locales that reduce stigma and segregation. Services should be provided on an individualized basis where possible. Services should be easily available and accessible to all who need them regardless of income, race, or religion. Clients should be treated as developing individuals, who although capable of growth, may require the gradual transfer from a dependent relationship to more independent functioning. Service providers should ensure that wherever possible a client's natural support system should be enhanced and utilized to assist the client.

Components of a Community Support System

a) "Mental Health Services. There should be a full range of mental health services, including but not limited to: diagnostic evaluation; 24-hour intensive crisis stabilization services either in hospital or in a community-based setting; emergency services; prescription, periodic review and regulation of medication; and community-based psychiatric and psychological services."
More explicit mention should be made for the availability of beds for short-term hospitalizations. Inpatient units are an integral component of the Mental Health Services section of the community support system, as hospitalization is necessary for some of the chronic patient population (Lamb and Geortzel, 1972). In order to minimize the isolation of the inpatient service from the rest of the community support system, the beds should be located within the immediate area it serves. A bed to population ratio of .25 per 1000, the average ratio for the province presently, should be adequate for local psychiatric beds. The central mental hospital has not been included in this estimate, as it is only required for the few intractable patients exhibiting grossly anti-social behaviour. Lamb's estimate for this group, mentioned in Chapter 1, was 5 beds per 100,000. The low number of all inpatient beds is adequate as the efficacy of short hospitalizations, i.e. 3 to 21 days, has been demonstrated (Reissman et al., 1977). Utilization of inpatient services can be further minimized with the availability of partial hospitalization services as described by Glasscote et al. (1969).

Community-based outpatient clinical services such as group and individual therapies, chemotherapy, and family interviews are necessary if community tenure, i.e. the period between hospitalizations, is to be maximized (Winston et al., 1977). Community treatment of the more "markedly
impaired" can be a realistic expectation, as demonstrated by Test and Stein (1976) in Wisconsin. As treatment of this segment of the chronically disabled is centered more in the community, there is a necessity for the 24-hour crisis stabilization service mentioned by Turner. This service was shown by Polak and Kirby (1976) to be able to prevent many hospitalizations with the additional advantage of offering opportunities to solve real problems of clients in situ -- problems that may have been unreachable before.

b) "Psychosocial Rehabilitation Services. There should be community-based psychosocial rehabilitation services which include but are not limited to:
- Training or retraining of clients in community living skills such as grooming, budgeting, shopping, housekeeping, etc.
- Opportunities for clients to assume and adjust to normal social roles, such as worker, club member, resident, etc.
- A wide spectrum of special living arrangements, offering varying degrees of supervision, assistance and support, and linked with necessary mental health, social rehabilitation and other such services.
- Recreational and social opportunities.
- Vocational evaluation, training and placement services."

The community-treatment program in Wisconsin reported by Stein et al. (1975), and Test and Stein (1976) was "designed to help patients acquire the coping skills and autonomy necessary for a reasonable community adjustment". They recognized that treatment techniques "frequently utilized with healthier outpatients have been unsuccessful with . . . the markedly impaired . . . (i.e.) those patients
who traditionally have been treated by public mental hospitals and aftercare programs. The Wisconsin patients lacked the following coping skills: "activity of daily living skills, vocational skills, leisure time skills, and social or interpersonal skills". Sheltered workshops were the primary locale used by Test And Stein for training patients with these functional deficits. Other natural treatment locales were used such as: community living arrangements for patients, local social-recreational facilities, stores, laundromats, etc. In vivo approaches were utilized, since the authors recognized that the chronically mentally disabled had difficulty in generalizing learned behaviours from one environment to another, and that patients had the right to be viewed as responsible adults in normal social roles. The result of the Wisconsin program was avoidance of hospitalization and increased community functioning since the patients had learned "instrumental and problem-solving behaviors".

Fish (1962) has estimated that up to 70% of schizophrenic patients will exhibit some lasting deterioration or defect in functioning. Half of these will require long-term maintenance of varying degrees and kinds. The expectation for the remaining 30% will be a complete or adequate social cure, i.e. resumption of normal social roles. This epidemiological paradigm should provide an estimate of the extent of rehabilitation services needed within the care system.
c) "Long-Term Community Support and Maintenance Services. For those clients who have reached their highest level of functioning and for those who because of their age or the nature of their illness are inevitably declining in ability to function, there should be services available to sustain functional capacities or to reduce the rate of deterioration. These services include the same basic elements as psychosocial rehabilitation services, listed above, and in addition, provide the following:
- A spectrum of long-term supportive living arrangements.
- Opportunities for long-term sheltered employment.
- Other full or part time daily activities for persons who may not be capable of competitive employment but who need opportunities to participate in community life and to function as a member of a supportive group."

The importance of meaningful social and vocational roles for the chronically disabled has been mentioned above. These roles are important for patients with permanent functional disabilities which impair full integration into the 'normal' social and economic system. Specially designed supportive social systems, which include a variety of housing arrangements, will be required for a percentage of the chronic population for an indefinite period of time.

There are several myths (Sheets, 1976) held by service providers which have inhibited their acceptance of specially designed support systems for chronic patients unable to further benefit from rehabilitation efforts. These myths fail to recognize that some clients choose to level off at a particular social, vocational, and residential level, at which point further insistence to move on can be destructive. Another myth is that all clients
should become individually independent; yet attaining a realistic level of functioning may be contingent upon a degree of dependence on some aspect of the designed support system. The normalization myth precludes recognition that some schizophrenics may choose, and benefit from, affiliation with others like themselves, where they may feel more comfortable and accepted. Several social and housing programs have been operating successfully on a denial of these myths, such as Fountain House in New York and Coast Foundation in Vancouver.

Reporting on the experience of the Ft. Logan Mental Health Centre, Kraft et al. (1971) show that 8.7% of all admissions to the Centre required its services for a period longer than five years, and 2.7% of admissions were seriously enough impaired to require 24-hour supervision ranging from inpatient care to half-way house accommodation. The 8.7% of admissions requiring services for longer than two years consumed 48.5% of all patient days for the 24-hour supervised range of services. The considerable amount of resources consumed by this group should indicate the importance of designing a support system, for the long-term disabled, that guarantees placement at a level of care commensurate with optimal functioning. Lack of sophistication in assessment and service design will ultimately result in over-utilization of valuable resources by a small number of people.
d) "**Community Integration and Acceptance Strategies.**

As clients move to less restrictive settings, there should be a planned and sustained effort to help the community accept, integrate and relate appropriately to chronically mentally disabled persons. Approaches to this include, but are not limited to the following:

- Systematic planning for dispersal of clients to avoid oversaturating certain neighborhoods or communities.
- Family or social systems counseling services.
- Emergency backup services to family, friends, landlords, employers.
- Opportunities for concerned community members to participate in program planning, to volunteer their services or resources, to provide jobs and housing, and to see clients functioning in normal social roles.
- Community education.
- Training, consultation, and backup services to community agencies who share responsibility for providing services to people with psychiatric problems."

The organized community support system cannot expect to directly look after all the needs of the chronically disabled. Ideally, the system should only intervene to provide housing, employment, and social supports when these components are not normally available. Short of providing these components directly, the care system should encourage community members to assume their responsibilities in coping with, and managing the functional deficits of the disabled. Families, landlords, schools, and employers will feel more comfortable in accepting community members with chronic disabilities if they have the support and backup of service agencies.

Community acceptance strategies are important in ensuring that the disabled are able to obtain their rightful place in the mainstream "markets" of housing, income support,
social services, health services, and recreation facilities. The hospitalized patient, especially the chronically disabled, carries a stigmatizing label. This goes back to the days when asylums were for the "furiously mad" and "manifestly dangerous" (Overholser, 1955). This stigma may interfere with a chronic patient's right to access community facilities, work places, and housing. The care system has the responsibility to advocate on the patient's behalf when access is blocked.

e) "Protection of Client Rights. There should be clearly defined mechanisms to protect client rights, both in and outside of mental health facilities."

The literature concerned with the rights of the mentally ill (Katz et al., 1967; Jackson, 1970; Rock, 1968; Overholser, 1955; and others) primarily examines issues of involuntary commitment, right to refuse or receive treatment, and procedures for release from mental hospitals. These are substantive issues, and cannot be addressed within this paper, as thorough examination of social policy and medical-legal jurisprudence is required. However, for the chronic patient, there are three areas which should be considered within this model.

For patients deemed incapable of making decisions in respect to treatment, some legislation requires that consent to treatment be obtained from the next-of-kin, and if unavailable, the institution takes the responsibility (Jackson, 1970). As presented in Chapter 1, many
chronically disabled persons lack significant contacts with family and may not have an advocate from this source. In these cases, the system has the responsibility to develop procedures to protect the patient's rights and dignity.

Chronic patients tend to 'silt-up' in mental hospitals and receive little more than custodial care. American courts have recently set precedents which require State hospital administrations to place these patients in the "least restrictive setting possible". This principle should be incorporated into the practices of community service agencies as chronic patients also 'silt-up' in community boarding homes and other facilities.

Finally the system should be developed, with a comprehensive network of services and supports, to prevent service providers and community members from using hospital commitment in all but the most necessary situations. Over-reliance on involuntary commitments, and unnecessarily long hospital stays on commitment, is directly proportionate to the availability of alternatives to hospitalizations (Rock, 1968).

f) "Planning, Coordination, Case Management, and Continuity of Care. The following conditions are necessary to constitute an effective system of care for the chronically disabled:
- At the State (Provincial) level, there must be an inter-agency collaborative effort to develop administrative, financial and other arrangements to assure availability and accessibility to the population of relevant high quality services.
- At the community level, there must be a clearly defined case management system to identify and reach out to the population; to assess their service needs, to plan for delivery of services in the least restrictive setting and to follow-along to assure that services are delivered and plans are updated as required.

- At the client level, services should be organized to promote continuity of supportive relationships. As far as case-management is concerned, this means that there should be one person or team responsible for establishing and remaining in contact with the chronically disabled individual on a continuing basis, regardless of how many agencies get involved. The total number of clients assigned to this person or team should be small enough so that each client is regarded and treated as a unique individual, and so that a supportive, caring relationship is possible.

- Finally, all services should be organized to help clients become or remain part of a network of caring relationships, i.e., a personal support system. In this way, clients can develop capacities for mutual and self-help. At the same time, unnecessary dependency on the organized service system can be reduced."

The National Institute of Mental Health, in a subsequent policy paper (NIMH, 1977), identified two necessary conditions for community services to be considered an integrated system. First, there must be a "core services agency" which is specifically identified as helping the severely mentally disabled. This agency will provide one or more of the basic service components, outlined in this chapter, and take responsibility for establishing linkages with agencies providing the other components. Linkages must also be established with "mainstream" agencies including welfare, health, and housing. Secondly, there needs to
be recognition by designers of the system that a single person or team has to be responsible for linking the client to the various service components. This responsibility is the "case management" function which could be carried out by the patient's assigned primary therapist of the core agency. A similar function was built into the design of the Greater Vancouver Mental Health Service (Cumming, 1972).

The remaining chapters of this thesis will examine Vancouver Island services with the objective of recommending a comprehensive system similar to the model presented in this chapter. Reiterated by Neufeldt (1979), this will require an examination of the range of services provided, the regionalization (or dispersal) of these, and the location of the empowered authority to coordinate them to meet the needs of individual clients.
Chapter 5

Method of Analysis and Sources of Data

The planning region selected for this paper is Vancouver Island in the province of British Columbia. The 1976 Canada Census reports a population for the area of 441,407 within an area of 22,000 square miles. All major towns and cities have general hospitals of which four have specifically designated psychiatric units. Six communities have mental health centres. Voluntary agencies provide half-way houses, activity centres, and workshops for the mentally ill in some communities. Riverview hospital and psychiatric wards in general hospitals in the City of Vancouver also serve the Island population. All of these services, in addition to private medical practice, make-up the psychiatric service system for Vancouver Island.

As stated in the Introduction, a necessary step required in this paper is the assessment of the services currently available to the chronically mentally disabled in a specific region. Questions that would be asked during this assessment arise from the model community service system outlined in the preceding chapter. These questions are:

a) Are all components of the model system available to the disabled in each area of the planning region?
b) To what extent are existing service system components being utilized by the chronically disabled in the different areas?

c) Is there sufficient organization of services to provide continuity of care at the client level, and services planning at the area and regional level?

At the beginning of Chapter 2, it was stated that utilization of services by the chronically disabled could be estimated once their expected prevalence was known. The same chapter concluded that expected prevalence derived from psychiatric case registers provide the best estimates. As stated in Chapter 1, not all the chronically mentally disabled can be diagnosed as schizophrenic, nor do all persons with schizophrenia become chronically disabled. The correlation, however, between them is high enough to consider the two classifications as one for planning purposes.

A review of psychiatric services utilization will include both inpatient and outpatient services used by the planning region residents. Where possible, the utilization of these services by patients considered to be chronically mentally disabled will be extracted. These figures will be compared to the expected prevalence of schizophrenia. The types of data that will be examined are:

a) separation data from acute care general hospitals;
b) admission data from psychiatric units in acute general hospitals;
c) Riverview Hospital patient movement reports and patient profiles;
d) client movement reports from provincial mental health centres; and
e) attendance reports of workshops and activity centres.

Finally, an assessment will be made of the services available to the chronic patients and the degree of coordination among these services. Judgements were arrived at on the basis of information supplied from interviews with service providers.

The planning area of Vancouver Island has been divided into three regions for easier examination. These regions, as shown in Figure 1 on page 132, are:

a) **North Island** which includes School Districts 71, 72, 84 and 85;
b) **Central Island** which includes School Districts 65, 66, 68, 69 and 70; and
c) **Capital Region** which includes School Districts 61, 62, 63 and 64.

There are advantages in using these three regions. Each region is comprised of distinct catchment areas of mental health centres, hospital districts, and public health units. The regions are also composites of Canada Census divisions.
Variations in Prevalence Estimates

There is an inherent degree of uncertainty in forecasting utilization of a health service (Martin, 1975). This would be particularly true with a mental health service, with much of the uncertainty accounted for by the difficulties in case determination.

Wing et al. (1967) attributed diagnostic practices as accounting for the differences in rates of schizophrenia between the Baltimore and two British case registers from Camberwell and Aberdeen. The crude rates of treated schizophrenia from the Baltimore Case Register and that from Monroe County in New York are similar. Cooper (1970) examined the diagnostic practices of British and American psychiatrists and found a consistent difference in their respective definitions of schizophrenia. The British definition is much tighter since the British psychiatrists tend to exclude twenty to thirty percent of cases that American psychiatrists would diagnose as schizophrenia. Studies comparing Canadian diagnostic practices to the British or American were not searched. It is quite reasonable to assume that the Canadian definition lies somewhere in between the American and British, as both influences are prominent in Canadian psychiatry.

As Martin suggests, a forecasted range of utilization is more realistic, given uncertainty, than a single number forecast. The range will use an upper and lower bound, and a mean. If a single number is to be used at all, the mean would be the most reasonable. Given the international
differences in case determination, the rates from the Monroe County case register* will provide the upper bound, and the Camberwell register, the lower bound. Table 5.2 below shows the expected one-year treated prevalence of schizophrenia for the different regions of Vancouver Island, calculated from these rates.

Table 5.2

Range Estimates of Treated Prevalence of Schizophrenia (number of cases)

<table>
<thead>
<tr>
<th>Vancouver Island Regions</th>
<th>Upper Bound</th>
<th>Mean</th>
<th>Lower Bound</th>
<th>% Deviation from Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Island</td>
<td>336</td>
<td>277</td>
<td>219</td>
<td>21%</td>
</tr>
<tr>
<td>Central Island</td>
<td>653</td>
<td>553</td>
<td>456</td>
<td>18%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>1059</td>
<td>931</td>
<td>803</td>
<td>14%</td>
</tr>
<tr>
<td>Vancouver Island Total</td>
<td>2048</td>
<td>1761</td>
<td>1478</td>
<td>16%</td>
</tr>
</tbody>
</table>

The expected prevalence from the Monroe County age and sex specific rates are shown in Column (1) and is considered the upper bound estimate. The Camberwell crude rate (435 per 100,000) was also applied to the population, the resulting prevalence is shown in column (3), and is considered the lower bound. Column (2) shows the mean expected prevalence. All these figures will be utilized to estimate the actual capacity of services for this patient group.

One minor source of error in Table 5.2 is that column (1) is calculated from age and sex specific rates, and

* These rates applied to the Vancouver Island population by age and sex are shown in Table 5.1 on page 123.
column (3) from a crude rate. This error should not be significant enough to affect the presentation in this chapter. Column (4) shows the percentage deviation from the mean prevalence figure for each Island region. The differences in these percentages are attributed to the different age structures of the regions.

**Sources of Service Utilization Data**

a) **General Hospital Separation Reports**

Service reports from general hospitals provide certain information on separated patients which includes: age, sex, diagnoses, days of care, treatment received, and school district of patient's residence. This information is submitted for financial reimbursement from the provincial insurance plan. The 1977 hospital separation of all patients, over 15 years of age, who received psychiatric care are reviewed in this chapter. This group of separations includes patients with a primary psychiatric diagnoses (ICDA-8 codes 290.0 to 315.99), and patients with self-inflicted wounds with a secondary psychiatric diagnosis. These separations, for residents of Vancouver Island, are presented in Table 5.3. (Table 5.3 and subsequent tables in this chapter follow the Summary at the end of this paper.)

There are some disadvantages in using hospital separations for planning. Diagnosis of patients may be unreliable. The number of separations per year, and not the actual number of individuals separated, is reported. Diagnosis for separations by school district is not available,
only diagnosis for all separations in the province.

Separation data will be used primarily to assess where residents of Vancouver Island seek treatment.

b) Psychiatric Unit Data

General hospitals do not report patient separations from designated psychiatric units distinct from all acute patient separations. Therefore, a questionnaire was sent to the four Vancouver Island hospitals containing designated psychiatric units. It was requested that each unit describe its services, and report admissions and occupancy rate for 1977. These data are shown on Table 5.4 and will be compared to the separation data for all acute beds in the hospitals. From the two data sets, it will be possible to calculate the percentage of psychiatric care separations that were treated in the hospital's psychiatric units.

c) Riverview Hospital Data

Riverview Hospital is the only provincially owned and operated mental hospital in B.C. It is located on the mainland and is several hours travelling time from most points on the Island. However, a number of Island residents are admitted to Riverview each year. This hospital's 1978 patient movement report provides the number of admissions from Vancouver Island by the patient's area of residence. These data are presented in Table 5.5.

Patient prevalence information was obtained from a survey of Island residents who were on the wards as of June 25th, 1978. The survey included an assessment of the level of care in which each patient could be most appropriately
placed. The levels ranged from "living independently" to "acute psychiatric setting". Criteria for the eight levels of care are found in the Appendices. The results of the assessments are shown in Table 5.6. Additional information obtained from the survey is found in Table 5.7. This includes length of stay in Riverview, age, sex, diagnosis and referral source.

d) Mental Health Centres Data

There are six provincially funded and administered mental health centres on Vancouver Island. Two are in the Capital Region, three in the Central Region and one in the North Region. On most clients served, certain information is collected upon opening and closing their files. This data is processed in the central office in Victoria, from which various statistical reports are available. These reports do not contain a reliable count of the numbers of schizophrenics served by the centres, as diagnosis is not recorded. The term "chronic mental illness" is sometimes recorded for cases opened, so will be used in this paper in lieu of diagnosis. The numbers of cases reported having a "chronic mental illness", as a proportion of the centres' total caseload, are presented in the text of the next chapter.

Between October 1978 and January 1979 visits were made to all the mental health centres except the one in the North Region. Centre staff were asked about their caseloads and services available in the community to the
chronically disabled. Estimates of the numbers of chronically ill were constructed from the interview information where possible, and compared to the 1976 annual report of the provincial mental health centres.

Table 5.8 shows allocation of clinical positions and psychiatrist sessions in the mental health centres with rates of coverage for the catchment area population. The number of these clinical positions specifically designated to care for the chronically ill are presented in the text of the next chapter.

A number of assumptions have to be made in interpreting the data sources described above. One of these is the problem of duplicated patient counts. A patient may use the services of a mental health centre, general hospital and Riverview in the same year, and be counted three times. Therefore, totalling patient counts from these sources can be misleading and therefore are avoided.

Another problem is that each service uses different terms, and probably different criteria, to describe cases, interpreted for this paper, as chronically mentally disabled. This type of problem is inherent in using secondary data sources and cannot be avoided.
Chapter 6

The Planning Area: Current Situation

Vancouver Island is located offshore from the mainland of British Columbia and is approximately two and a half hours travelling time from the city of Vancouver. The Island has an economy representative of the Province with forestry, fishing, mining, agriculture and mixed manufacturing. Much of the area is relatively uninhabited with over three-quarters of the population clustered along the major highway on the south-east and south coast. Some areas are quite isolated with inherent difficulties in delivering services. The population in these areas is relatively small, but with a large proportion of native Indians.

The North Island Region

The North Island includes the school districts of Courtenay (#71), Campbell River (#72), Vancouver Island West (#84) and Vancouver Island North (#85) which are recognized as the catchment area of the Courtenay Mental Health Centre. School districts #72 and #85 include portions of the province's mainland but most of the population of these districts are on the Island portions. Thus, the entire area of these two districts will be included in the planning region. The four school districts have a combined population of 69,930 at a density of 3.57 persons per square
mile. School District #85 is the least populated with 1.54 persons per square mile and School District #71 is the most, with 42.99 persons per square mile.

a) **Services**

There are three hospitals over 10 beds in size in the region. These are in Alert Bay (S.D. #85) with 53 beds, in Campbell River (S.D. #72) with 92 beds, and in Comox (S.D. #71) with 145 beds. The latter contains the only psychiatric inpatient unit in the region. The 20 beds in this unit provides .28 psychiatric beds per 1000 population which is .03 beds per 1000 over the provincial average for this category of psychiatric inpatient facility. The Comox hospital does not provide other psychiatric services such as a day hospital or outpatient services.

The North Island is served by a Mental Health Centre in the city of Courtenay which has 6.5 full-time equivalents of professional staff. This is a ratio of 9.3 staff to 100,000 population (see Table 5.8). However, the Mental Health Centre mainly serves its immediate area of Courtenay and Comox which contains 29,415 population. This would in effect give it 22.1 staff per 100,000. The Centre had plans to position clinical staff in other communities in the near future. The Centre has a part-time nurse designated specifically to care for the chronically mentally ill.

There are 2 psychiatrists in Courtenay serving the entire region. They provide 1 half-day per week each to the Courtenay Mental Health Centre with the remainder of
their time spent in private practice. They also provide consultation in the Campbell River Hospital once a week.

There are virtually no psycho-social rehabilitation or long term maintenance programs for the chronically disabled. The Mental Health Centre supervises a boarding home program which has 85 beds in the area, most of these are in the Courtenay school district. There is a home with 12 beds for 'burnt out' schizophrenic males and another home with 8 beds for a younger schizophrenic group needing a short to medium stay. The remainder of the boarding home beds in the area are occupied by the mentally retarded. There is a sheltered workshop for the retarded but not for the mentally ill, and there is no activity or social centre. Both the hospital and the Mental Health Centre use the local community centre for a recreation group one day a week, and a few chronic patients participate.

b) Utilization of Services

The mean expected one year prevalence for schizophrenia for the North Island is 277 (+ 58) persons. This number should represent the number of persons who will seek and receive some form of treatment in a one year period. Some will be treated in the hospital, some in the Mental Health Centre, and others in family practitioners' offices. A certain number of patients may be treated in two or more of these services, and some will seek treatment out of the region.

The psychiatric unit in Comox had 523 admissions in 1977, of which 16 to 20 per cent are estimated to be for
schizophrenia. Included in this number are readmissions. Table 5.3 shows 974 separations for psychiatric care for the population over 15 years of age in the North Island Region. Much of this difference is attributable to separations from the Campbell River and Alert Bay hospitals. Although diagnosis is not available for these separations, it is probable that the small northern hospitals treat a large number of alcohol related disorders.

Out-of-area hospitals which admitted some of the region's cases were Nanaimo Regional Hospital (32 separations), Vancouver area hospitals (31 separations) and Royal Jubilee/Eric Martin Institute (9 separations). It is obvious that the latter is not a prominent regional referral centre for the North Island. The number of psychiatric cases handled outside the region's hospitals amounted to 8.1 per cent of the total separations, and of these, 3 per cent were treated off the Island.

Additionally, the Riverview admissions should be considered. In 1978, 17 admissions from the region were recorded into Riverview Hospital. Half of these were readmissions. The rate of admission for the area was 33.69 per 100,000 population over 15 years of age. This is above the average for the Island which is 17.91 per 100,000. It is quite possible that some of the 17 admissions to Riverview would be accounted for in general hospital separation data as they would be transferred from these hospitals. But, as
seen in Table 5.7, many Riverview patients have been admitted directly on a doctor's referral and have bypassed the local unit.

As of June 1978 there were 11 residents from the North Island area in Riverview Hospital. Seven of these patients required intensive or longterm psychiatric care; some, in addition, required medical care. The 4 other patients could have been cared for in local facilities if these had been available.

The Courtenay Mental Health Centre had 328 open cases at year end 1976. Of this number, 48 had a chronic mental illness. The Centre Director reports that many of the chronic patients are carried by the private psychiatrists. The general practitioners apparently refer these cases to them rather than to the Mental Health Centre.

The Central Island Region

The Central Island region contains the following school districts with their population and density per square mile, and one year mean expected prevalence of schizophrenia:

<table>
<thead>
<tr>
<th>School District</th>
<th>Population</th>
<th>Density</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberni (#70)</td>
<td>32,170</td>
<td>10.76</td>
<td>153</td>
</tr>
<tr>
<td>Qualicum (#69)</td>
<td>88Q</td>
<td>52</td>
<td>2Q6</td>
</tr>
<tr>
<td>Nanaimo (#68)</td>
<td>47,095</td>
<td>36.10</td>
<td>214</td>
</tr>
<tr>
<td>Cowichan (#65)</td>
<td>47,095</td>
<td>36.10</td>
<td>214</td>
</tr>
<tr>
<td>Lake Cowichan (#66)</td>
<td>141,145</td>
<td>553</td>
<td></td>
</tr>
</tbody>
</table>
The five school districts are shown above in three groupings as each group is served by a major hospital and a mental health centre. Services and their utilization have to be discussed with reference to these three sub-areas.

a) Services

There are 3 major hospitals in the region, although only 2 of them have a designated psychiatric unit.

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Total Beds</th>
<th>Psychiatric Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>per 1000</td>
</tr>
<tr>
<td>Port Alberni</td>
<td>139</td>
<td>0</td>
</tr>
<tr>
<td>Nanaimo</td>
<td>274</td>
<td>24</td>
</tr>
<tr>
<td>Cowichan</td>
<td>141</td>
<td>10</td>
</tr>
</tbody>
</table>

Only the Nanaimo hospital provides a psychiatric day program. No other partial hospitalization or outpatient services are available through the hospitals. The Port Alberni hospital has made application to the provincial government for an 8 bed psychiatric unit. This hospital also has tentative plans for a day hospital program.

There are 3 Mental Health Centres serving the Central region with a total of 13.5 clinical positions. Two of these positions have been designated specifically for nurses to work with the chronically ill and disabled. The 3 Centres are:

<table>
<thead>
<tr>
<th>Clinical Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Port Alberni</td>
</tr>
<tr>
<td>Nanaimo</td>
</tr>
<tr>
<td>Duncan (Cowichan)</td>
</tr>
</tbody>
</table>
There are 5 practicing psychiatrists in the region. One is in Port Alberni, and provides all his time to the Mental Health Centre which includes consulting at the hospital. There are 3 psychiatrists in Nanaimo; all provide sessional time to the hospital, but only 1 provides a half-day per week to the Mental Health Centre. The Cowichan area has 2 psychiatrists. One works at the hospital and the other provides 7 half-days per week to the Duncan Mental Health Centre.

Psych-social rehabilitation and long-term maintenance programs are a little better developed here than in the North region. The Duncan Mental Health Centre in the Cowichan area supervises a boarding home program which has beds for the mentally ill. These are all chronic patients. No rehabilitation occurs in these homes but some residents attend an activity program in a church hall 2 or 3 days a week. In addition, 4 residents attend a workshop which mainly serves the mentally retarded.

There are only 18 places for the mentally ill in designated mental health boarding homes in the Nanaimo area. A division of the hospital's day program is attended by 18 to 25 chronic schizophrenic patients who participate in social and recreational programs. The Mental Health Centre nurse provides a half-day per week to this program. The Canadian Mental Health Association, a voluntary organization, also operates a recreation program for chronic patients and many of its participants also attend the
hospital day program. While this area has a wider community program than the North Island, staff at the hospital and the Mental Health Centre stated that there were still program shortages resulting in a greater use of the inpatient unit than was necessary. Readmission rates were reported as being especially high among the younger schizophrenics. Community program components mentioned as needed were a rehabilitation-oriented half-way house, a more structured treatment-oriented day program, and follow-up of hospital discharges.

The above opinions provided by the Nanaimo staff were echoed in Port Alberni which has no psycho-social rehabilitation services, including housing programs, for the chronically disabled.

The degree of coordination among the services in the region varies. Each of the sub-areas of Port Alberni, Nanaimo, and Cowichan are distinct and there are no programs coordinated between them. The Port Alberni Mental Health Centre has initiated several measures to facilitate coordination and communication between local services, including meetings, feedback to referring agents, and consultations. Centre staff in Duncan are involved in several community organizations including the Psychiatric Planning Committee at the hospital. The focus of these coordinating efforts, however, is primarily for patient groups other than the chronically disabled. Even with a psychiatrist working at the Nanaimo Centre and the hospital day program,
there was lack of coordination of discharge planning from the ward and follow-up in the community. No formal agreement exists between these services to develop linkage mechanisms.

b) Utilization of Services

Local hospitals in the Central Island Region were able to treat most of this region's separations for psychiatric care from general hospitals.

### Location of Treatment for Psychiatric Care for General Hospital Separations

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Number of Psychiatric Care Separations Discharged from</th>
<th>Region Hospitals</th>
<th>Victoria Hospitals</th>
<th>Vancouver Hospitals</th>
<th>% non-local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cowichan</td>
<td></td>
<td>537</td>
<td>42</td>
<td>9</td>
<td>8.7</td>
</tr>
<tr>
<td>Nanaimo</td>
<td></td>
<td>620</td>
<td>11</td>
<td>11</td>
<td>3.5</td>
</tr>
<tr>
<td>Port Alberni</td>
<td></td>
<td>418</td>
<td>17</td>
<td>7</td>
<td>6.0</td>
</tr>
</tbody>
</table>

The psychiatric units in Cowichan and Nanaimo were able to treat about 70 per cent and 90 per cent, respectively, of the psychiatric cases separated from their hospitals. The Port Alberni hospital does not have a psychiatric unit, but treated 337 of the 442 psychiatric separations for the population in this school district. The Nanaimo hospital is the second preferred site for admissions by Port Alberni residents.

The psychiatric units in Duncan and Nanaimo reported 277 and 612 admissions respectively for 1977. Staff in the Duncan unit reported that 10 to 15 per cent of their
admissions had a diagnosis of psychoses. Nanaimo staff reported a figure of 23 per cent for schizophrenia. Even though Port Alberni is without a psychiatric unit, the hospital staff thought that about 15 per cent of their patients were schizophrenic. Port Alberni staff did say that many patients are sent directly out of the area for treatment.

Riverview admitted 35 patients from the Central Island region in 1978. Table 5.5 shows the admission rates for the 3 sub-areas varies considerably. Port Alberni has the highest rate in the region, and the entire Island, at 65.10 per 100,000 over 15 years of age. The Cowichan area has the lowest rate for the Island at 14.46 per 100,000 over 15. The average admission rate for the Island is 17.73 per 100,000 over 15.

The Central Island region had 42 patients on the Riverview wards as of June 1978. Forty-five per cent of these were assessed as requiring levels of care which could be provided in community settings, but as described above, there are few facilities to care for the chronically disabled in the region.

The 3 Mental Health Centres reported 1076 enrolled cases at year end 1976. Of this number, 87 were reported as having a chronic mental illness. The three Centres and numbers of reported cases are shown below.
Recent interviews with the Duncan Centre staff revealed a total active caseload of approximately a third of the above number with even fewer chronic cases being carried. On the other hand, Port Alberni staff provided a verbal updated caseload count of 334 cases of which approximately 65 are chronic schizophrenics. It was not unexpected to find that the psychiatric nurses in the Port Alberni and Nanaimo Mental Health Centres were carrying most of the chronic cases.

The Capital Regional District

The Capital Region includes 4 school districts and 2 Mental Health Centre catchment areas. The school districts with their population are as follows:

<table>
<thead>
<tr>
<th>School District</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Victoria (#61)</td>
<td>163,934</td>
</tr>
<tr>
<td>Sooke (#62)</td>
<td>31,437</td>
</tr>
<tr>
<td>Saanich (#63)</td>
<td>28,800</td>
</tr>
<tr>
<td>Gulf Islands (#64)</td>
<td>6,421</td>
</tr>
<tr>
<td></td>
<td>230,592</td>
</tr>
</tbody>
</table>
a) **Services**

The Capital Region is served by 4 acute care hospitals: 1 each for the Gulf Islands and North Saanich, and 2 regional hospitals in the City of Victoria. The Royal Jubilee Hospital in Victoria is the largest with 695 beds, and has the only psychiatric unit in the region. Called the Eric Martin Institute (E.M.I.), the unit is the largest general hospital psychiatric unit in the province with 100 adult care beds. The Capital Region also has the highest bed-to-population ratio in the province with .43 psychiatric unit beds per 1000 population.

Eric Martin should have only 57 beds if the district were provided with the provincial standard (.25 beds per 1000) for this type of facility. To a limited extent, as seen in Table 5.3, the hospital serves as a secondary referral centre for the Island. In this capacity, E.M.I. could support 3 more beds.

A symptom of a system problem in the Capital Region is the inaccessibility of inpatient care. Although the region has proportionately 70 per cent more beds than any other region on the Island, there is a constant demand for access. As a result the hospital has implemented several buffering mechanisms which regulate flow and frustrate referring agents. These agents are forced to resort to admission through the Royal Jubilee Hospital Emergency, and to involuntary committal procedures. About 25 per cent of admissions to Eric Martin are involuntary; a figure much
higher than other psychiatric units.

It is notable that Eric Martin has not found adequate means to cut average length of stay which is almost twice the average for other psychiatric units in the province. Many patients stay several months on the wards when they could be placed at lower levels of care. Conversely, there are numerous complaints from community sources that some patients are being discharged too early and without sufficient discharge planning to guarantee community tenure.

The Institute does not have staff psychiatrists as all treatment and discharge orders are given by those in private practice. This system, while appropriate for medical wards where criteria for clinical practice is more clearly defined, is not appropriate for a psychiatric ward. Without strong direction governing admission criteria, length of treatment period, and discharge planning, the inpatient service cannot guarantee that its service is going to be used appropriately and in accordance to the total community's needs.

Eric Martin Institute makes available 2 night beds to the physicians in the emergency wards of the 2 Victoria hospitals. Psychiatric emergencies are initially handled by these physicians who attempt to get a psychiatric consultation when indicated. Difficulties have been reported in obtaining consults after normal working hours and on weekends. After-hours availability of a psychiatrist is arranged by those in private practice, and is primarily a coverage system.
for patients already carried by this group. In some situations this service is available on an emergency basis, but consultation, when obtained, is usually over the phone. The result is that disposition of emergencies is largely decided by casualty officers who when pressed can use the 2 night beds at E.M.I. after 8 p.m. Clearly a gap exists between 5 p.m. and 8 p.m.

Approximately 130 psychiatric emergencies present themselves to Royal Jubilee Hospital each month, of which 20 are admitted to the night beds. Forty per cent of the night bed patients are subsequently admitted to E.M.I. in the morning and the remainder are sent home. The majority sent home from the emergency wards and the overnight beds are not followed for aftercare. This is another gap in service complained about by many field workers in the Victoria area. There is no arrangement with the Mental Health Centres to follow this group of patients.

The Capital region is served by 2 Mental Health Centres. The Victoria Centre serves part of the Greater Victoria School District which includes the municipalities of Esquimalt and Oak Bay, and City of Victoria. The population of this area is 98,743. To some extent the Centre serves the Sooke School District which has a population of 31,437. There are 12 full-time Mental Health Centre clinical positions or 9.23 per 100,000, for the entire catchment area.

The second Mental Health Centre, in Saanich, serves the Gulf Islands and Saanich School Districts, and the
part of Saanich municipality which extends into the Greater Victoria School District. The total population of this catchment area is 100,430 persons. With 5.5 full-time clinical positions, the Centre provides 5.48 per 100,000 population.

Both Mental Health Centres have staff available to chronic patients. The Victoria Centre has 2 psychiatric nurses and the Saanich Centre has 1 psychiatric nurse. Three staff stationed at the Victoria Mental Health Centre have been assigned the responsibility of developing and supervising community boarding homes in the region.

Each Centre receives sessional time from psychiatrists; Saanich receives 10 half-days per week and Victoria 15 half-days. The psychiatrists at the Centres do not admit to the Eric Martin Institute. To gain admission for a Centre client, a referral is first made to a general practitioner who in turn gains admission.

Some psycho-social rehabilitation programs exist in this region. Two of the 6 boarding homes supervised by Centre staff provide some preparation for community living to 22 residents, although one home is understaffed because of funding limitations. There are no satellite apartment programs or cooperative housing. A voluntary organization, Canadian Mental Health Association, operates two programs for the chronically disabled. One is a recreation/activity oriented day program which has 50 to 70 participants, and the other attempts to teach social and daily living skills.
to a similar group. Some residents of the boarding homes attend these programs.

Vocational services for the mentally ill are operated by several non-profit agencies. The Arbutus Crafts program teaches basic job skills to about 15 to 20 mentally ill persons. The Garth Homer project provides some vocational counselling and training. St. Vincent de Paul takes in 10 mentally ill persons at a time for pre-employment assessment and basic training. Although Victoria is better serviced in this area than the rest of the Island, most professional care-givers expressed a need for more comprehensive vocational programs including assessment, training, and placement.

b) Utilization

The City of Victoria with a population of 62,545, has characteristics of most cities; substandard housing, a skid row, highrise development, charity missions and social services for the dispossessed, and single room occupancy hotels. In short, the city contains elements which correlate with a concentration of people marginally attached to the mainstream of society. Within this group would exist a large number of chronic schizophrenics, many of whom would have drifted to the city core from the surrounding area.

Because of the nature of the region, i.e. having an urban core and rural periphery, it is likely that the calculation of expected prevalence for schizophrenia, by school district, may not reflect the actual distribution of morbidity
within the region. A technique is proposed here which allows for a recalculation of prevalence distribution. This technique uses general hospital separation data, continuing with the assumption that the proportion of chronic mental illness to all hospital separations for psychiatric care is relatively constant from region to region.

The hospital separations for the Capital Region's population by school district have been reproduced on Table 6.1 (page 130). Column (1) shows the separations for psychiatric care from all four acute care hospitals in the region. Column (2) shows these separations as rates. There are large differences among the school districts for hospital separation rates for psychiatric care. These differences are shown as proportions to the average rate for the entire Capital Region in column (3). These proportions were used as weights and applied to column (4), i.e. the expected prevalence of schizophrenia in each school district. The resulting calculation, in column (5) shows the revised number of expected cases in each school district. This revised distribution of cases should reflect the degree of drifting towards the urban core.

In keeping with the earlier presentation of a range estimate of prevalence, the column (5) Distribution of schizophrenia would appear as follows:
<table>
<thead>
<tr>
<th>Location</th>
<th>Upper Bound</th>
<th>Mean</th>
<th>Lower Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Victoria</td>
<td>865</td>
<td>758</td>
<td>651</td>
</tr>
<tr>
<td>Sooke</td>
<td>82</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td>Saanich</td>
<td>94</td>
<td>82</td>
<td>71</td>
</tr>
<tr>
<td>Gulf Islands</td>
<td>22</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1063</strong></td>
<td><strong>931</strong></td>
<td><strong>800</strong></td>
</tr>
</tbody>
</table>

There were 1908 general hospital separations for psychiatric care attributed to the Capital Region's population in 1977. All but 54 separations (2.83%) were treated within the region. This is the lowest proportion of all Island regions. The total psychiatric separation rate for general hospitals is also the lowest for the Island. Of the 1908 separations, 75 per cent were treated at the Royal Jubilee/Eric Martin complex. It is interesting to note that this hospital treated 78 per cent of all psychiatric separations for the Victoria and Sooke School Districts' residents, 56 per cent for Saanich residents, and 23 per cent to those of the Gulf Islands. Distance and availability of local beds probably affects utilization of the psychiatric facilities at the central hospital. It can be suggested that local hospitals have a capacity to treat many of their communities psychiatric problems.

If 16 per cent, the province-wide average, of all the psychiatric separations were for schizophrenia, then 305 separations in this region would be attributed to this illness.
The Royal Jubilee/Eric Martin complex treated 1551 psychiatric care separations in 1977. All but 113 of these were attributed to the region's population. Only 64 (4 per cent) of the separations were attributed to residents from the rest of the Island. More than twice this number of Island residents were treated in Riverview and Vancouver hospitals. E.M.I., with its high bed-to-population ratio, and more than twenty admitting psychiatrists, has not managed to fulfill the role of a secondary treatment centre for Vancouver Island.

E.M.I. also draws on the local area for its outpatient service and day program. Approximately 25 to 35 chronic patients are attending the outpatient service, primarily for medications. Virtually no schizophrenics attend the day program as this is a program for neurotics.

The Capital Region has the lowest Island admission rate to Riverview, with 9 patients being admitted in 1978. These were all admitted from the Victoria Mental Health Centre catchment area so represent a rate of 6.91 admissions per 100,000. In June 1978, Riverview had 58 patients whose home address was within the Capital Regional District. All but 1 of these were from the Victoria Centre's catchment area. Sixteen of these Riverview patients were assessed as requiring acute psychiatric care and 14 as requiring long-term psychiatric and medical care. The remainder, or 49 per cent, could be cared for in local facilities, but are not because of a shortage of facilities. Most of these
patients referred to Riverview over the years have a diagnosis of functional psychosis (35 out of 58) and, secondly, of organic psychosis (18 out of 58).

In 1976, the Saanich Mental Health Centre declared 54 or 9.2 per cent of its 587 open cases as having a chronic mental illness. The Victoria Centre declared 458 open cases in 1976, of which 183 (39 per cent) were classified as having a chronic mental illness. This percentage is higher than any other Island Mental Health Centre. Part of the reason is that the Centre has the psychiatric nurse positions specifically designated to care for the chronic patient. The nurses report carrying 100 chronic psychotics between them. The Saanich Centre has 1 psychiatric nurse who carries 40 chronic clients. Some of the caseload of the 3 nurses reside in the boarding homes which are supervised by other Centre staff.

All of the 85 residents in the mental health boarding homes have medication prescribed by the psychiatrist in the Victoria Mental Health Centre. Most other chronic patients have medications prescribed by physicians and psychiatrists in private practice. Only some of these patients receive long-term follow-up and contact by the 3 community psychiatric nurses in the Mental Health Centres. Many more patients are referred but the nurses have refused additional referrals because of their heavy existing caseload.

There exists at least four separate means for maintaining the chronic patient in the community. The Mental Health
Centres support two of these. Only the community nurse's role approaches the concept of case manager as outlined in Chapter 4. But this function is limited both because of high caseloads and lack of coordination between the services they would need to access for their clients.

Summary

The mean one year treated prevalence for schizophrenia has been estimated to be 1761 for Vancouver Island. As mentioned earlier, about two-thirds of this number will exhibit permanent disabilities or defects impairing full social functioning.

The population in the three Island regions produced 4554 hospital separations which received psychiatric care. Approximately 16 per cent, or 730 separations, were for schizophrenia, although the percentage treated in local psychiatric units varied between 12 per cent in Duncan to 23 per cent in Nanaimo.

Hospital separation data cannot be compared to the expected prevalence of schizophrenia as hospitals record numbers of separations, not numbers of individuals treated. However, if it were assumed that some of these separations represent the same person being admitted twice or more during the year, and that between 500 to 600 individuals account for the 730 separations for schizophrenia, then approximately one-third of the expected prevalence were provided inpatient treatment during 1977.
As seen in Table 5.2 and 5.5, the areas of the Island vary in their use of Vancouver hospitals and Riverview. The area with the least utilization of out-of-region hospitals is the Capital Region by virtue of having a surplus of psychiatric beds, many being used for chronic care. The area with the next lowest percentage is Nanaimo, which is the only hospital providing a day program for the chronically ill. Port Alberni has the highest utilization rate for Riverview hospital and is the only region without local psychiatric unit beds.

Clinical outpatient services for the chronically ill are incompletely provided by Mental Health Centres. The psychiatric nurse positions for the chronic patients are provided to some Centres but not all. There is a direct relationship between nursing time available and percentage of total Centre caseload that is chronic. While not surprising, this relationship suggests an additional need for the nurse positions. Additionally, the psychiatrist sessions available to the Centres do not seem to be allocated on a consistent basis of need. Port Alberni Centre has one nurse and a full-time psychiatrist available, while Nanaimo Centre has the nurse but only a tenth of a full-time psychiatrist.

If two-thirds of the expected 1761 schizophrenics receiving treatment or care in one year have a lasting functional impairment, then many would show up in Mental Health
Centre caseloads. Yet only 371, (or 15 per cent), of the Centres' total caseload were declared as having a chronic mental illness, with some having schizophrenia. If even one-half of the expected schizophrenic with a permanent disability would require the Centres' services at a point in time, there would be about 610 cases at the Centres.

Local general practitioners refer more of the serious mental pathology to psychiatrists than to the Centres. Private practice cannot bill the insurance plan for many services that chronic patients need and which could be provided by non-medical personnel. One result of this situation is an over-use of hospital care, which is the most expensive component in the total system.

Comprehensive community-based psychiatric services should be available as an alternative and a continuation to inpatient care. Alternatives should be available through the Mental Health Centres and specially designed day programs. However, the emphasis of professional time in the Centres is on situational disorders, lifestyle counselling, and family and marital interventions. Basic linking services such as emergency triage and regular follow-up from inpatient to outpatient care do not exist.

The community nurse program is an attempt by the Mental Health Centres to provide follow-up to chronic patients, but this is still inadequate. There are not enough of them and they are not part of a system, as no real system exists. The services in the Island region show themselves as
elements sharing a similar geography. The failure to develop inter-agency collaborative efforts, continuity of care, and case management can be attributed to several factors. No mental health agency has been provided a mandate to exercise leadership. The Mental Health Centres are part of a provincial system which historically has been unable to operationalize a clear mandate. The psychiatric units and Eric Martin particularly are basically workshops for private practitioners, each following their personal practices. The hospital units have little internal integration and leadership, let alone providing leadership outside their walls. Not enough resources have been provided to voluntary agencies dealing with the chronically seriously ill, thus no organized voice has arisen from this sector.

The following chapter will address these service deficiencies and organizational problems, and give specific recommendations.
Chapter 7

The Planning Area: Recommendations

The existing psychiatric services on Vancouver Island have been examined in the previous chapter. The general hospital psychiatric units and Mental Health Centres are the main components of the public intervention and treatment system. The chronic patient shows up fairly consistently in the former service and less so in the latter. Riverview hospital also serves as a treatment resource for psychotic patients, with a significant number in residence who could be returned to the community. The communities do not have the capacity to reintegrate these patients, nor the capacity to adequately maintain or rehabilitate those already resident locally. As a result, there are multiple readmissions to local psychiatric units. Not only do communities lack service capacity, the existing components show no properties of a coordinated system.

A plan for the Island that is intended to rectify these deficiencies should be presented in detail, as service providers need guidelines for implementing new components and for task coordination. Funding agencies and politicians need to know the extent of the system being proposed. System planners should have sufficient detail to estimate manpower availability, impact on other service systems, and demands on resource allocation mechanisms. The communities that are asked to take responsibility for their disabled citizens
should be helped to realize the extent of their responsibility.

**A Procedure for Estimating Service Demand**

Several references have been made in Chapter 3 to literature that propose service systems. Only one of these (Townsend, 1977) attempts to estimate the actual capacity of system components for a chronic patient population. These capacities should be extracted and directly applied as estimates of service requirements to complete the local community support system on Vancouver Island. One shortcoming of this procedure is that Townsend draws on American experience and although the service issues may be similar, different service arrangements may have produced estimates not appropriate for local use. To guard against this problem, Townsend will be used as a check on the results of a service utilization and need study completed on a local service; the Greater Vancouver Mental Health Service (Tomlinson et al., 1977).

This survey report attempted to determine the extent the proposed Social Services Act (S.S.A.) would affect community mental health programs in Vancouver. This legislation was intended to aid the Provinces in their response to the changing social and personal needs of Canadians by attempting to improve existing cost-sharing arrangements in this area. The Bill was not passed however, for as part of a cost-containment program it was pulled from the Order paper.
of the House of Commons in late 1977.

A number of services were outlined in the Bill as eligible for federal cost-sharing. The service activities of the Greater Vancouver Mental Health Service were appraised using the criteria for the sharable services listed in the Bill. Several of these service descriptions are quoted below.

**Rehabilitative Services**

This section of the Social Services Act services was divided into two parts for the survey. The first part retained the title Rehabilitation Services and were described as those services which "intend to reduce or remove the effects of an impairment which substantially limits a disabled person's ability to obtain or maintain employment and/or to undertake the normal activities of daily living in the community. These services may include: assessment, services to aid independent living, counselling, socialization, pre-vocational training, ... provisions for access to places of residence/training/or employment. For the purposes of the Act community mental health services of a rehabilitative nature provided in the community are considered as rehabilitative services."

For the survey, a part of this section was extracted and termed Employment Services which included the phrases "employment preparation and work activity, employment support, alternative employment, (i.e. sheltered work settings)".
Social Integration Services

Social Integration Services as outlined in the S.S.A. were designed "to aid individuals who are socially isolated, or members of groups for which there is an unusually high incidence of individual social isolation" and the intent was to "build or maintain positive interpersonal relationships, or to develop or engage in personally satisfying group activities, or to participate meaningfully in community life. This service must include:

"a) representational and facilitative services to remove or reduce obstacles preventing individuals and groups utilizing goods and services.

b) socialization services to identify problems and help integrate individuals in a social group.

c) counselling services.

d) outreach services, and may include reception services or supportive living environments of a short term nature for individuals in transition."

Day Care for Adults

"Day Care for Adults is intended to provide a supervised program in the community that must include activities, personal care, and emergency first aid, overseeing medication and liaison with the home situation. It may include one meal." This description of day care would include existing day hospital programs.

Residential Services for Adults

"Residential Services for Adults are intended to provide board and room, supervision, personal, nursing,
protective/supportive care, or social rehabilitation services." This would include the care provided in the existing mental health boarding homes.

The Social Services Act survey used a large sample of the G.V.M.H.S. enrolled clients (402 of 2601). A survey instrument was administered to the primary therapist of the sample in order that two questions be answered.

1. "How many clients of G.V.M.H.S. are currently receiving the different services as described under S.S.A.?

2. "How many client of G.V.M.H.S. should receive further services such as those described under S.S.A.?

The cumulative answers to these questions, for the five services outlined above, are shown below.

<table>
<thead>
<tr>
<th>Service Heading</th>
<th>Question #1</th>
<th>Question #2</th>
<th>Both Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation</td>
<td>81%</td>
<td>3%</td>
<td>84%</td>
</tr>
<tr>
<td>Employment</td>
<td>3%</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td>Social Integration</td>
<td>26%</td>
<td>21%</td>
<td>47%</td>
</tr>
<tr>
<td>Day Care</td>
<td>1%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Residential</td>
<td>17%</td>
<td>3%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Ernest Townsend (1977) evaluated the economic feasibility of treating schizophrenic patients within a community-based system as opposed to a hospital-based system. He estimated the percentage of cases, based on a one-year expected prevalence of schizophrenia, that would use various components of a community system. Some of Townsends's components of community care can be regrouped to approximate
the classifications of services used in the Social Services Act. Townsend's estimates of utilization appear below.

<table>
<thead>
<tr>
<th>Category of Service</th>
<th>Townsend Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation</td>
<td>40 - 81%</td>
</tr>
<tr>
<td>Employment</td>
<td>12 - 18%</td>
</tr>
<tr>
<td>Social Integration</td>
<td>24 - 40%</td>
</tr>
<tr>
<td>Day Care</td>
<td>---</td>
</tr>
<tr>
<td>Residential</td>
<td>14 - 18%</td>
</tr>
</tbody>
</table>

There are minor differences between the utilization estimates of the two studies. Townsend estimated utilization within a one-year period while the Tomlinson survey reported utilization within a three-month period. Considering the chronic nature of schizophrenia, the different time periods should not adversely affect comparison. Townsend's range of utilization for Rehabilitation Services is attributed to his detailed estimates for different rehabilitation therapies; this was not available in the Tomlinson paper. The 81 per cent and 84 per cent figures refer to use of chemotherapy, the lower figure to other therapies.

The categories of services described in the Social Services Act survey are not identical to the categories described in the model system in Chapter 4. They do, however, describe most services under the model system headings of "Psycho-social Rehabilitation Services" and "Long-term Support and Maintenance Services". To a lesser extent, they
describe services within the headings of "Mental Health Services" and "Community Acceptance Strategies". In spite of difficulties in comparability to the model, the service categories used in the Tomlinson study do provide a quantification of demand for some model system components. These demand estimates will provide a starting point for local region planning.

Estimates of Service Capacity in the Planning Region

Calculations of service capacity can be made once the expected utilization, or demand, for the service is known. Utilization can be considered to be the number of persons at risk who would use a service in a given time period. A better estimate of utilization would result if it was based on the number of cases expected to be "active" in the service system at any one time. Only a proportion of the expected prevalence of schizophrenics will be "active" in the service system. Some cases will be in a state of remission, others will have not yet entered the system. Seventy percent of the expected cases of schizophrenia will be considered to be active at one time. This is the percentage of schizophrenics that Fish (1961) proposed would require some degree of indefinite supports for daily living.

The capacity of a service is defined as the number of clients that can be enrolled at one time. The capacity of the service components, taken from the Social Services Act survey, has been calculated for each of the three sub-regions of
Vancouver Island. These calculations are shown in Table 7.1 on page 131. Also shown in the table is estimated capacity for minimally supervised housing, as described by Tomlinson and Cumming (1976), and an estimate of the number of case managers required for all cases enrolled in the system of services. Thirty cases will require one case manager.

Column (2), of Table 7.1, lists: (a) the number of enrolled cases within the service system at any one time, i.e. 70 per cent of the one-year mean expected prevalence; (b) the mean number of enrolled cases expected to require the five service categories at any one time, (some clients would be using more than one service); and (c) the mean number of primary workers required for all enrolled cases. Column (3) shows the deviation from the mean in order that the upper and lower bounds on the utilization may be estimated. Column (4) lists: (a) the number of chronic clients currently enrolled in the five categories at the time of the survey of services on the Island and; (b) the current number of professionals (nurses and social workers) in the Mental Health Centres specifically available to the chronic patient.

The deficiencies in service capacity for the chronically mentally disabled for the three sub-regions of Vancouver Island is apparent from comparison of columns (2) and (4) on Table 7.1. It would be useful to examine these areas in
greater detail in order that these service need estimates can be integrated with the services already available. Because of the size of the Capital Region relative to the others, this examination will concentrate on this area.

Service Recommendations for the Capital Region

In Chapter 4, a service system model was presented as being able to meet the needs of the chronically ill and disabled. Services were categorized under the following headings:

a) Mental Health Services
b) Psycho-Social Rehabilitation Services,
c) Long-Term Support and Maintenance Services,
d) Community Integration and Acceptance Strategies,
e) Protection of Clients' Rights, and
f) Planning, Coordination, Case Management and Continuity of Care.

Estimates of certain services have been made and presented in Table 7.1. These will be integrated into the model in order that specific recommendations can be made from its outline.

Mental Health Services

It is proposed here that all services under "Mental Health Services" be provided by publicly organized services. Private medical practice does not have the financial mechanisms available to provide comprehensive services to the
chronically mentally ill and disabled.

The two Mental Health Centres in the Capital Region do not presently have the capacity for 574 to 730 enrolled chronic clients for the "diagnostic evaluation . . . prescription, review and regulation of medication; and community-based psychiatric and psychological services" that this section of the model requires. The addition of the 18 (range 15.5 - 20.5) case managers is intended to give the Mental Health Centres this capacity. The case manager positions also provide primary mental health services to the chronic patient. Hence there are two roles built into the job description: case management and treatment. With the latter, the case manager is considered as the "primary worker" for the client. Some of these services are currently being provided within the private practice system and to a degree this will continue. A phasing-in of the primary worker positions will allow for a gradual transfer of this service from the private to public system.

Most of the chronically disabled will be using psychotropic medications for an indefinite period. Nursing skills will therefore be an important ingredient of the case manager position. Social work skills in the provision of support to patients' social systems and in the manipulation of these systems are also necessary. The case managers could be from either social work or nursing disciplines and with
a team approach built into the task, each discipline will assist the other in essentially a common task. One physician should be available for clinical support to every 5 primary workers, or 150 clients.

Case managers should be allocated throughout the region to reflect the estimated distribution of their expected case loads. This distribution was estimated in Chapter 5. The allocation of case managers, or primary workers, would be based on the assumption that 70 per cent of the above range of cases would be enrolled in services at any one time. Allocated on the basis of one case manager to thirty cases, the case manager distribution by school district would be:

<table>
<thead>
<tr>
<th></th>
<th>Maximum</th>
<th>Mean</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Victoria</td>
<td>20.0</td>
<td>17.7</td>
<td>15.2</td>
</tr>
<tr>
<td>Sooke</td>
<td>1.9</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Saanich</td>
<td>2.1</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Gulf Islands</td>
<td>.6</td>
<td>.5</td>
<td>.4</td>
</tr>
<tr>
<td></td>
<td>24.6</td>
<td>21.8</td>
<td>18.7</td>
</tr>
</tbody>
</table>

As the region already has four nursing and social work positions available to the chronically ill, then a mean estimate of 17.8 positions is additionally required.

Crisis intervention and stabilization services could be improved if the physicians in the emergency wards of the two hospitals in Victoria has 24-hour access to psychiatric beds for assessment and triage. These services should be organized as part of the public system with a
special short-term assessment and treatment unit (under one week stay) set up in Eric Martin Institute. The Vancouver population is using 12 beds in a similar assessment unit, so 6 beds should be adequate for the Capital Region. The emergency component should be contractually linked with outpatient services for mandatory follow-up for patients not requiring continued inpatient care.

As part of the public system, it is proposed that Eric Martin Institute be reduced in size from .43 beds per 1000 population to .25 per 1000. This would provide a unit of 58 beds. Additionally beds will be needed for the Institute to function as the secondary referral centre for other Island psychiatric units. Eric Martin is currently receiving about 64 cases annually from other Island regions, with Vancouver hospitals and Riverview receiving 147 admissions annually. Some admissions to the mainland will continue to be appropriate, but as further community support services are established in the other Island regions, some of the patient flow off the Island would be reduced. It is possible then, that E.M.I. might pick up a residual 74 (one-half of 147) admissions. With an average length of stay of 30 days, these secondary admissions (64 plus 74) will require 11 beds. E.M.I.'s total bed count will then be: 11 beds for secondary referrals from the Island, 58 beds for primary referrals from the Capital Region and 6 beds for an assessment unit, for a total of 75 beds.
The current admission rate to E.M.I. will be reduced with more effective triage of emergencies, and by the availability of additional psycho-social rehabilitation services and long-term support and maintenance services.

**Psycho-Social Rehabilitation and Long Term Community and Maintenance Services**

These two sections of the model Community Support System will be discussed together as many programs will provide both short-term training and long-term support. It has been shown that 40 per cent to 84 per cent of cases enrolled in the system will require rehabilitation services. The higher figure applies to the need for chemotherapy service provided under Mental Health Services. We can conservatively expect then, to have 40 per cent of the enrolled cases, i.e. 260 ± 36, to require social and community living skill training. This training can be provided within the existing voluntary organizations such as the Canadian Mental Health Association and Garth Homer Achievement Centre. These existing services provide skill training to approximately 70 clients. Their capacity should be increased three times. After several years of working with the chronically disabled this capacity could be reduced as the clients learn to function more effectively in the community.

Social Integration Services are required for 306 clients (+43). Some of these clients need specially designed social centres such as the existing Cornerhouse which serves 50 to 70 chronically disabled. Others need programs that
involve them in existing community recreational and social facilities. These programs may be run by volunteers or the clients themselves. Some chronics need encouragement to access existing social possibilities to prevent isolation and deterioration of functioning. Some of this encouragement will be given by the primary worker.

Housing for the mentally ill provides both a long-term and short-term function. The estimate for Residential Services in Table 7.1 is for long and short-term care for various levels of client functioning. The minimum service to be provided in the 124 (+17) beds estimated, is daily meal preparation and limited supervision. The maximum service would be 24-hour nursing care and strict time-structuring. The current 85 beds in this category of service should be expanded to the estimated number. If the psycho-social rehabilitation services were developed as recommended, some of the existing residents would be capable of progressing to less supervised settings. The vacated beds and the additional capacity would allow for the repatriation of the 27 Riverview patients who were assessed as being capable to live in community settings.

Another long-term community housing strategy is co-operative apartments, similar to that developed by Coast Foundation Society in Vancouver. Cumming and Tomlinson (1976), in a Vancouver study, estimated this need at one apartment per one thousand population over 15 years of age. This would result in a similar program in the Capital Region
for 170 clients. A description of this program is available in *Canada's Mental Health* (Tomlinson and Cumming, 1976).

A capacity of 117 places (+14) has been estimated for employment opportunities, both of a short-term training and long-term placement nature. The existing capacity of these services in the Victoria area is about 30 places in two settings. This should be expanded as indicated. Existing non-profit organizations should be encouraged to provide employment services under contractual arrangement.

**Community Integration and Acceptance Strategies**

The present system will have the capacity to assist the disabled's integration into the community with the addition of the case manager positions to the Mental Health Centres. Community acceptance strategies can also be the responsibility of voluntary agencies which work with the disabled. Perhaps the best strategy is the ability of the system to develop a quick response to the needs of community members in their relationships with the chronically ill and disabled. Employers, landlords, and family members will be more willing to provide opportunities if the system is able to provide support when required.

**Protection of Clients' Rights**

In the current system, clients' rights are being abused because the system works badly. Because a continuum of care is non-existent, response to clients in crisis is only
possible when the crisis demands hospital treatment. As this is difficult to obtain, committal procedures are invoked. A better, more comprehensive system would go a long way to preserving the rights of patients. However, since service providers are used to invoking committal procedures, the habit of not using them may be difficult to break. It is proposed that a patients' advocate office be established within the public system. Such an advocate would be charged with investigating all committed cases and recommending alternative courses of action where possible.

Planning, Coordination, Case Management and Continuity of Care

There are two necessary conditions for a set of services to operate as a coordinated system. First there must be a "core services agency" specifically identified to helping the severely disabled. Such an agency must have a clear mandate to do so and the authority and resources to make contractual arrangements with other services in the system. In this plan it is proposed that the core services agency be the Mental Health Centre.

The Mental Health Centres' administrative head office in the Ministry of Health will have to redefine the role and function of the Centres in their communities. An examination of existing function shows lack of leadership in local communities for services to the chronically disabled. Clear policy established in regulation is required in order for Centres to take the lead in planning and coordinating local services.
As the established core service agency, the Centres will provide the service function described under the heading "Mental Health Services". Inpatient care and 24-hour emergency service would be provided through the hospitals under contract. Other services would also be provided under contract. Most of these would be sponsored and operated by the non-profit agencies and would include vocational programs, recreation and housing.

The second necessary condition is a case management function. This provides for a single person to be responsible for linking clients to the appropriate services, ensuring continuity of care, and updating care plans. It has been proposed that the case management function be built into the job description of the primary workers in the core services agency, i.e. the reconstituted Mental Health Centres.

**Upper Island and Central Island Regions**

Recommendations for the Upper Island and Central Island services will be similar to those proposed for the Capital Region. The smaller population centres and remote communities in the two regions will probably require some differences in service organization.

The four Mental Health Centres in the cities of Courtenay, Nanaimo, Port Alberni, and Duncan should be mandated the responsibilities of a core services agency. These Centres can increase their capacity of providing mental health services to the chronically disabled by hiring the
numbers of case managers indicated in Table 7.1. The two Centres in Courtenay and Nanaimo will require more psychiatrists' time to be available to the new positions. Significant support from the Centres' central administrative office will be necessary in order for the Centres to develop a firm mandate of local services leadership.

It is probably not feasible in the near future to incorporate the local psychiatric units in Duncan, Nanaimo, and Comox fully into the public system. These communities do not have the high numbers of psychiatrists found in the Capital Region. A more suitable solution would be for the Ministry of Health to negotiate, in conjunction with the local Mental Health Centres, with the general hospitals to establish a proportion of psychiatric unit beds as "closed admission" beds. These closed beds would be operated under contract to the Mental Health Centre so that admission, treatment, and continuity of follow-up would be maintained between the two systems, i.e. inpatient and outpatient. A staff psychiatrist sharing time between the Centre and the closed unit beds would be an effective service-linking strategy. In conjunction with this joint service, new day hospital services could operate in Comox and Duncan. Twenty-four hour emergency service should be coordinated between the hospitals and Centres as well.

Port Alberni does not have a psychiatric unit, but nevertheless treats many of its hospital admissions for psychiatric care. Serious consideration should be given to
establishing a day hospital program in this community rather than an inpatient unit. The day hospital should be linked to the Port Alberni Mental Health Centre similar to the arrangement between Centres and inpatient units in the other communities. Nanaimo hospital could continue to receive inpatients for Port Alberni as the former unit has a surplus of beds.

Remote communities in the north end of the Island and the west coast such as Port McNeill, Port Hardy, Gold River, and Tofino-Ucluelet, provide a special problem in service delivery. These communities are not large enough to support organized psychiatric services. The chronically ill and disabled could be served by providing the local physicians with psychiatrically trained nurses on a permanent or visiting basis. The nurses would be employed by the nearest Mental Health Centre to work in the physicians' offices and be responsible to them. The nurses would aid the physicians in formulating treatment plans within the local community and referring appropriately outside the area. Perhaps four nurses could be placed initially.

The four major communities with Mental Health Centres should have an organized system of psycho-social rehabilitation and long-term maintenance programs. Each community should have vocational training and sheltered work settings operated by non-profit agencies under contract to the Centres. As well, there should be organized life-skills training programs and recreational services. Each of the
four communities could support a vocational program for twenty clients attending daily. About the same number could be served daily in recreational programs.

In the smaller communities, life-skills training and recreational programs should be combined into one service and operated out of general community recreation facilities. Perhaps volunteer programs organized from local hospitals could help the disabled in places such as Port Hardy.

Residential services show one of the biggest service gaps in the two regions. Housing, both supervised and minimally supervised, should be expanded as indicated in Table 7.1. Over time, the demand for special housing should decrease as the existing group of disabled patients learn to live in the community with fewer supports. Therefore, forms of housing should be selected that can be let out of service relatively easily. All housing services should be developed by non-profit agencies and under contract with the core services agency. In the smaller communities, forms of family, or foster care could be used, as well as satellite apartments, which could be subsidized, in order to allow the disabled to live in their own communities.

The plan proposed in this chapter could be implemented within a five year period and would cost no more than the existing system. Comparison of present and expected costs are shown in the next section.
Summary: A System Within Five Years

In the first chapters of this paper, the chronically mentally disabled were established as a special needs group which must receive an organized response from the treatment agencies. It has been proposed that within a model care system, these agencies should demonstrate leadership among a wide range of care and support services. There has been, however, much criticism directed at community mental health services, with the criticism focused on their inadequate response to the needs of the long-term disabled and severely mentally ill.

Vancouver Island has been considered as a planning region for services to the mentally disabled. The existing mental health services were surveyed and utilization studied. The results of this examination supported many of the criticisms found in the literature. No service had assumed a leadership role. Hence comprehensiveness and continuity of service was non-existent. The major gaps in the total care system were in the areas of emergency response, social and vocational rehabilitation, patient advocacy and housing. The only service area generously provided were hospital beds, which are also the most expensive part of the system.

In Chapter 7, it was proposed that the Mental Health Centres be given the responsibility of developing a coordinated and comprehensive system at the local level. Additionally, with the addition of more primary workers for the disabled, the Centres will be responsible for providing basic mental
health services and ensuring the individual client access to the various support services in the community. In order to fulfill their new role the Centres will require a clear policy statement from the provincial Ministry of Health, and administrative direction and planning support from the Centres' head office.

New funding relationships will have to be established with private non-profit agencies, as these agencies currently receive most funding from the Ministry responsible for welfare services. The non-profit agency has worked closely with public agencies in the past and should continue to do so. If provided a clear role in a service system for the mentally disabled, private agencies should be a valuable partner in a comprehensive system of services.

The new community care system should have clear goals to be achieved over a definite time period. It is proposed here that these goals be:

1) establishment of the system linking relationships within one year;

2) development of all system components with the recommended capacities within five years;

3) system components be fully developed in one area followed by a repeat process in the next; this is preferable to a service by service development within the entire region;

4) reduction in inpatient utilization with a subsequent reduction of beds, particularly in the Capital region;
5) a 95 per cent reduction of admissions to Riverview hospital within one year and a significant reduction in admissions to Vancouver hospitals;

6) all secondary inpatient care be provided to Vancouver Island residents by the Eric Martin Institute; and

7) a repatriation of Island residents from Riverview hospital over a five year period, as the local areas develop community facilities.

The cost of developing the proposed system should be offset in savings for inpatient care. These savings, at $4,218,125, would be derived from:

1) reduction of 25 beds at the Eric Martin Institute for a saving of $1,387,000 per year (25 beds @ $152 per diem);

2) discontinued use of Riverview hospital for Island admissions at a saving of $204,000 per year (60 admissions x 40 days stay x $85 per diem); and

3) repatriation of Island residents* from Riverview hospital at an annual saving of $2,627,125 (85 patients @ $85 per diem).

*These patients would be relocated in newly developed facilities the cost of which will be included below. It is expected that 25 to 30 patients will remain in Riverview as this is the number estimated to require long-term protective inpatient care.
The new services for the Island will have an annual cost of $3,902,000. The approximate cost for each service will be:

1) 33.5 case manager positions @ $30,000 each $1,005,000
2) Social Integration programs for 480 clients @ $1300 each 624,000
3) Day Care program for 72 patients @ $8000 per year each 576,000
4) Employment programs for 197 clients @ $3000 per year each 591,000
5) Supervised Residential services for 104 clients at $4000 per year each 416,000
6) Minimally Supervised apartments for 260 clients at $1500 per year each 390,000
7) Additional Psychiatrist time; approximately 5 @ $60,000 per year each 300,000

$3,902,000

A comparison between the savings and expenditure figures indicates a net saving to the system of $316,000 per year. This will not be claimed however, since other public costs will accrue from a shift from a hospital-oriented system to community-oriented system of services. The repatriation of Riverview patients will result in increases of social assistance payments. These have not been included in the expenditure estimates. On the other hand, approximately one-third of the expenditures would be eligible for federal cost-sharing under the Vocational Rehabilitation for Disabled Persons Act and the Canada Assistance Plan.
The cost comparison is only relevant when viewing the system as being fully developed. During the transitional period of five years there will be a duplication of expenditures, and for some services start-up expenses will be required.

It has been the policy of society in former times to hide away the mentally ill and disabled in asylums. These institutions are not being used in this fashion today. Instead, the mentally ill are attempting to survive in their local communities. Their record has not been good as shown in many reports of poor social margin and repeated use of hospital care. The record of the public service system in recognizing these patients' plight has not been good either.

There has been a failure in public policy to recognize that a problem exists with the chronically ill and disabled. This problem did not go away with the asylums. These patients still have the same needs to be met. The failure to recognize this fact has been a failure to accept a continuing responsibility.

The recommendations made in this paper have been an attempt to delineate some method for policy makers to re-assume society's responsibility for a forgotten group. Once this responsibility has been accepted and plans made for its operationalization, then the service system can claim to have entered the period John Sheets has called "the fourth revolution in psychiatry".
Table 5.1
Expected One-Year Prevalence of Treated Schizophrenia for Vancouver Island Regions: Calculated from Rochester Register Prevalence Rates for Population over 15, by Age and Sex

<table>
<thead>
<tr>
<th>Age Interval</th>
<th>Male</th>
<th>Female</th>
<th>Male Rate per 100,000</th>
<th>Female Rate per 100,000</th>
<th>Expected Prevalence (cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North Island Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 - 24</td>
<td>6,900</td>
<td>6,530</td>
<td>.699</td>
<td>.411</td>
<td>72</td>
</tr>
<tr>
<td>25 - 34</td>
<td>6,450</td>
<td>5,845</td>
<td>.874</td>
<td>.913</td>
<td>109</td>
</tr>
<tr>
<td>35 - 44</td>
<td>4,650</td>
<td>3,835</td>
<td>.930</td>
<td>1.144</td>
<td>86</td>
</tr>
<tr>
<td>45 - 54</td>
<td>3,680</td>
<td>3,415</td>
<td>.616</td>
<td>.753</td>
<td>48</td>
</tr>
<tr>
<td>55 - 64</td>
<td>2,640</td>
<td>2,440</td>
<td>.275</td>
<td>.445</td>
<td>18</td>
</tr>
<tr>
<td>65 +</td>
<td>2,035</td>
<td>2,030</td>
<td>.063</td>
<td>.113</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total 15 to 65+</strong></td>
<td>26,355</td>
<td>24,095</td>
<td></td>
<td></td>
<td>336</td>
</tr>
<tr>
<td><strong>Central Island Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 - 24</td>
<td>13,425</td>
<td>12,980</td>
<td>.669</td>
<td>.411</td>
<td>142</td>
</tr>
<tr>
<td>25 - 34</td>
<td>10,875</td>
<td>10,075</td>
<td>.874</td>
<td>.913</td>
<td>186</td>
</tr>
<tr>
<td>35 - 44</td>
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<td>7,215</td>
<td>.930</td>
<td>1.144</td>
<td>155</td>
</tr>
<tr>
<td>45 - 54</td>
<td>7,615</td>
<td>7,745</td>
<td>.616</td>
<td>.753</td>
<td>106</td>
</tr>
<tr>
<td>55 - 64</td>
<td>6,815</td>
<td>7,480</td>
<td>.275</td>
<td>.445</td>
<td>52</td>
</tr>
<tr>
<td>65 +</td>
<td>6,555</td>
<td>6,465</td>
<td>.063</td>
<td>.113</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total 15 to 65+</strong></td>
<td>53,030</td>
<td>51,960</td>
<td></td>
<td></td>
<td>653</td>
</tr>
<tr>
<td><strong>Capital Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 - 24</td>
<td>21,120</td>
<td>21,080</td>
<td>.669</td>
<td>.411</td>
<td>228</td>
</tr>
<tr>
<td>25 - 34</td>
<td>16,585</td>
<td>16,050</td>
<td>.874</td>
<td>.913</td>
<td>291</td>
</tr>
<tr>
<td>35 - 44</td>
<td>11,045</td>
<td>11,105</td>
<td>.930</td>
<td>1.144</td>
<td>229</td>
</tr>
<tr>
<td>45 - 54</td>
<td>12,255</td>
<td>13,710</td>
<td>.616</td>
<td>.753</td>
<td>178</td>
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<tr>
<td>55 - 64</td>
<td>11,715</td>
<td>14,535</td>
<td>.275</td>
<td>.445</td>
<td>97</td>
</tr>
<tr>
<td>65 +</td>
<td>14,700</td>
<td>20,805</td>
<td>.063</td>
<td>.113</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total 15 to 65+</strong></td>
<td>87,420</td>
<td>97,285</td>
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<td></td>
<td>1,059</td>
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<tr>
<td><strong>Total Island Region</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 65+</td>
<td>166,805</td>
<td>173,340</td>
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Table 5.3

General Hospital Separations for Psychiatric Care in 1977
for Vancouver Island School Districts by Hospital

<table>
<thead>
<tr>
<th>School District</th>
<th>Royal Jubilee</th>
<th>Duncan</th>
<th>Nanaimo</th>
<th>Port Alberni</th>
<th>Comox</th>
<th>Vancouver Island Hospitals</th>
<th>Vancouver Hospital Separations</th>
<th>Total Separations</th>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71 - Courtenay</td>
<td>3</td>
<td>17</td>
<td></td>
<td>359</td>
<td>4</td>
<td>9</td>
<td>392</td>
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<tr>
<td>72 - Campbell River</td>
<td>2</td>
<td>12</td>
<td></td>
<td>124</td>
<td>139</td>
<td>10</td>
<td>287</td>
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<tr>
<td>84 - Vancouver Is. North</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>21</td>
<td>24</td>
<td>4</td>
<td>54</td>
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<tr>
<td>85 - Vancouver Is. West</td>
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<td>2</td>
<td>2</td>
<td>46</td>
<td>182</td>
<td>8</td>
<td>241</td>
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</tr>
<tr>
<td>sub-total</td>
<td>9</td>
<td>2</td>
<td>32</td>
<td>1</td>
<td>550</td>
<td>349</td>
<td>31</td>
<td>974</td>
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<td><strong>Central Island</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 - Cowichan</td>
<td>21</td>
<td>289</td>
<td>8</td>
<td></td>
<td>17</td>
<td>3</td>
<td>338</td>
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<tr>
<td>66 - Lake Cowichan</td>
<td>7</td>
<td>61</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>67 - Ladysmith</td>
<td>8</td>
<td>12</td>
<td>44</td>
<td>2</td>
<td>95</td>
<td>6</td>
<td>167</td>
<td></td>
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<tr>
<td>68 - Nanaimo</td>
<td>4</td>
<td>509</td>
<td>2</td>
<td></td>
<td>11</td>
<td>9</td>
<td>53</td>
<td></td>
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<tr>
<td>69 - Qualicum</td>
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<td>1</td>
<td>96</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>107</td>
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<tr>
<td>70 - Alberni</td>
<td>13</td>
<td>1</td>
<td>31</td>
<td>337</td>
<td>53</td>
<td>7</td>
<td>442</td>
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<tr>
<td>sub-total</td>
<td>55</td>
<td>364</td>
<td>696</td>
<td>342</td>
<td>183</td>
<td>27</td>
<td>1672</td>
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<td><strong>Capital Region</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61 - Victoria</td>
<td>1216</td>
<td>2</td>
<td>14</td>
<td>1</td>
<td>4</td>
<td>290</td>
<td>21</td>
<td>1548</td>
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<tr>
<td>62 - Sooke</td>
<td>118</td>
<td>4</td>
<td>1</td>
<td>26</td>
<td>70</td>
<td>2</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>63 - Saanich</td>
<td>94</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>2</td>
<td>166</td>
</tr>
<tr>
<td>64 - Gulf Islands</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td>30</td>
<td>2</td>
<td>43</td>
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<td>16</td>
<td>1</td>
<td>4</td>
<td>416</td>
<td>25</td>
<td>1908</td>
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<td>Column totals</td>
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<td>374</td>
<td>744</td>
<td>344</td>
<td>560</td>
<td>948</td>
<td>83</td>
<td>4554</td>
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Table 5.4

Utilization Data for Vancouver Island General Hospital Psychiatric Inpatient Units

<table>
<thead>
<tr>
<th>Psychiatric Unit</th>
<th>Approved Beds</th>
<th>Admissions</th>
<th>Patient Days</th>
<th>Average Length of Stay</th>
<th>Unit Occupancy Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric Martin Institute</td>
<td>100</td>
<td>1475</td>
<td>32,120</td>
<td>22.0</td>
<td>88.0</td>
</tr>
<tr>
<td>Institute (Victoria)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cowichan District Hospital</td>
<td>12</td>
<td>277</td>
<td>2,737</td>
<td>9.9</td>
<td>75.0</td>
</tr>
<tr>
<td>Hospital (Duncan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Joseph Hospital</td>
<td>20</td>
<td>523</td>
<td>6,010</td>
<td>11.5</td>
<td>82.3</td>
</tr>
<tr>
<td>Hospital (Comox)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nanaimo Regional Hospital</td>
<td>24</td>
<td>612</td>
<td>7,964</td>
<td>13.0</td>
<td>90.8</td>
</tr>
<tr>
<td>Hospital (Nanaimo)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>156</td>
<td>2887</td>
<td>48,831</td>
<td>17.0</td>
<td>86.0</td>
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Table 5.5

Vancouver Island Admissions to Riverview by Mental Health Centre Catchment Area: With Rates per 100,000 over 15 years of age

<table>
<thead>
<tr>
<th>Region</th>
<th>M.H.C. Area</th>
<th>Riverview Admissions</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>All admissions</td>
<td>First admissions</td>
</tr>
<tr>
<td>North</td>
<td>Courtenay</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Central</td>
<td>Duncan</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Central</td>
<td>Nanaimo</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>Central</td>
<td>Port Alberni</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Capital</td>
<td>Saanich</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capital</td>
<td>Victoria</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>61</td>
<td>21</td>
</tr>
</tbody>
</table>

* Other: Returns from Extended Leave, escape, and transfers.
<table>
<thead>
<tr>
<th>S.D. Area</th>
<th>61, 62</th>
<th>63, 64</th>
<th>65, 66</th>
<th>67, 68, 69</th>
<th>70, 71, 72, 73, 74, 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nanaimo</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Duncan</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Courtenay</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Port Alberni</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Table 5.6

<table>
<thead>
<tr>
<th>Vancouver Island Patients, by Mental Health Centre Area, Resident in Riverview by Assessed Level of Care Required</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Living</td>
<td>.266</td>
</tr>
<tr>
<td>Personal Care</td>
<td>1.034</td>
</tr>
<tr>
<td>Intermediate Care</td>
<td>.327</td>
</tr>
<tr>
<td>Extended Care</td>
<td>.210</td>
</tr>
<tr>
<td>Mini-care Fernwood</td>
<td>.194</td>
</tr>
<tr>
<td>Pre-Infirmary</td>
<td>.169</td>
</tr>
<tr>
<td>Long Term North Lawn</td>
<td>.143</td>
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<tr>
<td>Psych Unit</td>
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<tr>
<td>Total</td>
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<td>Row</td>
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### Table 5.7

**Characteristics of Vancouver Island Patients Resident in Riverview**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>North Island</th>
<th>Central Island</th>
<th>Capital Region</th>
<th>Total Island</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Admission</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Medical Practice</td>
<td>9</td>
<td>22</td>
<td>24</td>
<td>55</td>
</tr>
<tr>
<td>Mental Health Centre</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>General Hospital</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total Resident Patients</strong></td>
<td>11</td>
<td>42</td>
<td>58</td>
<td>111</td>
</tr>
<tr>
<td><strong>Diagnosis</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional Psychoses</td>
<td>5</td>
<td>26</td>
<td>35</td>
<td>66</td>
</tr>
<tr>
<td>Organic Psychosis</td>
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<td>9</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td><strong>Length of Stay</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 6 months</td>
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<td></td>
<td>7</td>
</tr>
<tr>
<td>6 months - 2 years</td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2 years - 10 years</td>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>over 10 years</td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td><strong>Age</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>21 - 30</td>
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<td></td>
<td></td>
<td>16</td>
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<tr>
<td>31 - 40</td>
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<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>41 - 50</td>
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<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>51 - 65</td>
<td></td>
<td></td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>66+</td>
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<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
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<td></td>
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<td></td>
<td>64</td>
</tr>
<tr>
<td>Female</td>
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<td></td>
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<td>47</td>
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</table>
### Table 5.8

Allocation of Clinical Positions and Psychiatrist Sessions in Vancouver Island Mental Health Centres

<table>
<thead>
<tr>
<th>Mental Health Centre</th>
<th>Full-time Clinical Positions</th>
<th>Sessions/week from Psychiatrist</th>
<th>Population Served</th>
<th># Clinical Positions /100,000</th>
<th># Sessions /100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>13.0</td>
<td>15</td>
<td>130,180</td>
<td>9.99</td>
<td>11.54</td>
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<tr>
<td>Saanich</td>
<td>5.5</td>
<td>10</td>
<td>100,430</td>
<td>5.48</td>
<td>10.00</td>
</tr>
<tr>
<td>Duncan</td>
<td>4.0</td>
<td>7</td>
<td>47,099</td>
<td>8.49</td>
<td>14.86</td>
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<tr>
<td>Nanaimo</td>
<td>5.5</td>
<td>1</td>
<td>61,880</td>
<td>8.89</td>
<td>1.62</td>
</tr>
<tr>
<td>Courtenay</td>
<td>6.5</td>
<td>2</td>
<td>69,649</td>
<td>9.33</td>
<td>2.87</td>
</tr>
<tr>
<td>Port Alberni</td>
<td>4.0</td>
<td>10</td>
<td>32,174</td>
<td>12.43</td>
<td>31.08</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>38.5</strong></td>
<td><strong>49.0</strong></td>
<td><strong>441,412</strong></td>
<td><strong>8.72</strong></td>
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Table 6.1

Calculation for Distribution of Expected Prevalence of Schizophrenia by Capital Region School Districts

<table>
<thead>
<tr>
<th>School District</th>
<th>Separation for Psychiatric Care</th>
<th>Separation Rate per 100,000</th>
<th>Proportionate Weighting</th>
<th>Expected Cases</th>
<th>Revised Expected Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Victoria</td>
<td>Col. 1 1494</td>
<td>Col. 2 1106</td>
<td>Col. 3 1.12</td>
<td>774</td>
<td>865</td>
</tr>
<tr>
<td>Sooke</td>
<td>(#62)</td>
<td></td>
<td>0.64</td>
<td>128</td>
<td>82</td>
</tr>
<tr>
<td>Saanich</td>
<td>(#63)</td>
<td></td>
<td>0.74</td>
<td>127</td>
<td>94</td>
</tr>
<tr>
<td>Gulf Islands</td>
<td>(#64)</td>
<td></td>
<td>0.73</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1839</strong></td>
<td><strong>990</strong></td>
<td><strong>1.00</strong></td>
<td><strong>1059</strong></td>
<td><strong>1064</strong></td>
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Table 7.1

Estimated Capacity of Community Service Components

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<th>Region</th>
<th>Type of Service</th>
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<th>Col. 2</th>
<th>Col. 3</th>
<th>Col. 4</th>
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<td></td>
<td></td>
<td>Mean #</td>
<td>in this</td>
<td>Range of</td>
<td># in this</td>
</tr>
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<td></td>
<td></td>
<td>Service</td>
<td>Utilization</td>
<td>Service</td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>Enrolled Cases</td>
<td>194</td>
<td>± 41</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>Island</td>
<td>Rehabilitation</td>
<td>163</td>
<td>± 34</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Integration</td>
<td>91</td>
<td>± 19</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Day Care</td>
<td>14</td>
<td>± 3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>37</td>
<td>± 8</td>
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<td></td>
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<tr>
<td></td>
<td>Residential</td>
<td>39</td>
<td>± 8</td>
<td>20</td>
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</tr>
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<td>Apartments</td>
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<td></td>
<td># of Case Managers</td>
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<td>± 1.5</td>
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<td></td>
<td></td>
<td></td>
<td>1:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>Enrolled Cases</td>
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<td>± 69</td>
<td>220</td>
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<td>± 58</td>
<td>?</td>
<td></td>
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<tr>
<td></td>
<td>Social Integration</td>
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<td>± 32</td>
<td>32</td>
<td></td>
</tr>
<tr>
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<td>Day Care</td>
<td>27</td>
<td>± 5</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>73</td>
<td>± 13</td>
<td>0</td>
<td></td>
</tr>
<tr>
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<td>Residential</td>
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<td>± 14</td>
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<td>± 2.3</td>
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<td>652</td>
<td>± 91</td>
<td>178</td>
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<td>± 76</td>
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<td>± 14</td>
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<td>± 22</td>
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<td># of Case Managers</td>
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<td>± 3</td>
<td>4</td>
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Figure 1. Vancouver Island Planning Regions
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