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Bridget M. Hegeman
The University of Montana

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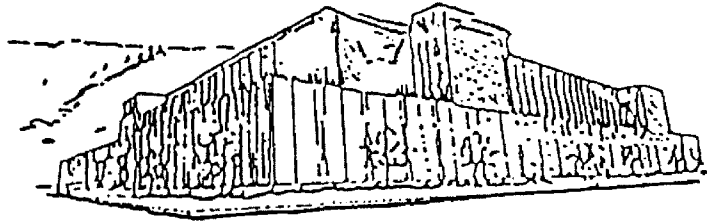Hegeman, Bridget M., "An Analysis of patient case records: Montana State Hospital 1920 to 1940" (1997). *Graduate Student Theses, Dissertations, & Professional Papers*. 8712.
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AN ANALYSIS OF PATIENT CASE RECORDS:

MONTANA STATE HOSPITAL, 1920 TO 1940.

By

Bridget M. Hegeman

B.S., University of Illinois, 1993.

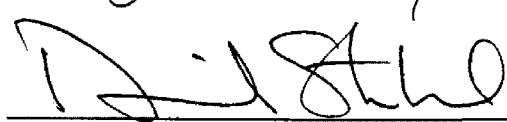Presented in partial fulfillment of the requirements

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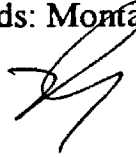
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ABSTRACT

Hegeman, Bridget M.   Clinical Psychology

An Analysis of Patient Case Records: Montana State Hospital, 1920 to 1940.

Director: David Schuldberg, Ph.D.

The study of archival data sets can be used to retrospectively analyze case records of patients admitted to psychiatric facilities in order to study mental health trends and practices of the past. The present study analyzed patient case records from Montana State Hospital in Warm Springs, Montana, between the years 1920 and 1940. A variety of information was coded and studied via exploratory analyses to address issues such as demographic variables, general trends over time in admission rates, patient diagnoses, length of stay, in-patient death rates, and discharge and readmission rates. Specific groups such as immigrants, gender groups, rural and urban individuals, and Native Americans were considered. Differences and similarities for these groups, demographic information, and trends in Montana mental health and practices were determined. Comparisons were also made between the in-patient population and the residents of Montana as reflected in the 1930 U.S. Government Census. Native Americans as a group were not examined due to a small sample size that made analysis impossible. Trends in the field of mental health and its practices in the state of Montana were determined, and it appears that differences existed between the state of Montana and other regions of the United States during this time period when considering specific variables. These variables included: the prevalent diagnosis for those under the age of 55 to be manic-depressive disorder and not demetia praecox/schizophrenia, as expected; the number of releases did not become more numerous over time, as expected; and, few differences were found between native and foreign born individuals, as was indicated by previous studies. There did not seem to be significant differences between various groups within the in-patient population studied, however. Comparisons between the study sample and census information revealed a number of characteristics which were associated with admission to the hospital and seem to indicate in what ways individuals were considered "different" or "sick" enough to be admitted to Montana State Hospital. This "profile" included characteristics such as being male; African american or "other" race; married, widowed, or divorced; illiterate; from a more "urban" area such as Anaconda, Billings, Butte, Great Falls, Helena, or Missoula; employed as a laborer, service provider, or in agriculture; and, if Caucasian, being foreign born. These patient case records were a rich source of information about the topic of mental health in Montana between the years 1920 and 1940.

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An Analysis of Patient Case Records:

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Much of the information that the field of psychiatry has about its past is based on

journals, books, and other reports from earlier time periods that describe theory or

practice. It is difficult to know how accurately these sources ascertain early psychiatric

practices of the day. It follows, then, that examining actual patient case records should

shed light on to the trends and practices of psychiatry in its earlier years. This can be

accomplished by archival data analysis methods.

Since the 1960s, archival data have been used to study the history of psychology

and psychiatry and to gain specific information about mental health trends and practices of

the past. Archival data sets are considered to be any information that has been recorded

and preserved from the past, such as census information, research notes, and case records.

Although archival research is employed often within the field of psychology, few studies

have utilized case records to examine past mental health patterns in general (Willer &

Miller, 1977a), and none has been completed within the state of Montana itself. One

archival data set containing patient case records is that from the Montana State Hospital in

Warm Springs, Montana, which includes approximately the years 1885 to 1945 and is

currently housed at the Montana Historical Society Archives in Helena, Montana.

The Montana State Hospital was established in 1877 and has continuously served

western Montana since that time. A study completed in the mid 1930's (Grimes, 1934)

compared all the mental health facilities in the United States determined that the hospital

had a rated capacity of 1350 patients, although its average capacity in the late 1920s and

early 1930s was over 1560 patients at any given time. It was considered to be average in

size, as the span of patient capacity for all United States mental health facilities ranged

from 500 to 3000 patients. Examination of the information provided revealed that during

this phase the Montana State Hospital was lacking when compared with other hospitals on

the basis of the total number of staff, including medical, nursing, and attendants. The

hospital employed approximately 90 staff members, whereas other facilities of comparable

size averaged closer to 150 employees.

Procedures for Archival Data Research

Elder, Pavalko and Clipp (1993) described a multi-step process of archival data

research. Initially, the investigator must specify the problem and have a clear sense of the

research question. In addition, the archival data set chosen needs to be appropriate to the

research problem. These two requirements are related, in that the researcher may start

with either the initial question or the data set and then proceed, respectively, to either the

appropriate data set or to a question that could be answered by the data set.

Once a potential research problem and corresponding data set have been selected,

these materials need to be evaluated to determine if the problem indeed represents a

researchable question and if the data set is adequate to respond to the problem. If all the

materials are acceptable, the investigator moves on to write a codebook, a listing of the

variables under consideration and corresponding codes for each potential value or level of

the variable. This codebook is subsequently used to code the data. The codebook may be

developed utilizing an existing coding scheme or one that the investigator creates

specifically for the data set of interest.

If the data are already coded in a form that is not useful to the current project, the

researcher may decide to recode the data. In deciding to recode the data, the investigator

determines whether creating new codes is worthwhile. If it is deemed advantageous to recode, the research question may need to be refined to relate more closely to how the data will be recoded. Also, available coding schemes need to be considered to determine if standard or existing codes could be used that already fit the data and would allow the research question to be answered; otherwise the researcher needs to create an entirely new coding scheme. The new materials, recoded data and/or the refined question need to be reevaluated to assure that they are acceptable to address the project at hand.

In writing the codebook, the investigator provides the definitions of each code for the levels of the variables of interest. The codebook should begin with a complete description of the archive and its contents and should provide background information on the research goals behind the coding effort. For each code there should be a conceptual definition and clear examples for what is indicated by the code (e.g., the difference between two codes: 3 = severe: impairment is the disability; treatment is urgently needed; prognosis is guarded; and 4 = extremely severe: impairment is life threatening; treatment is emergent or possibly of no avail; prognosis is grave. [Elder et al., 1993, pg. 29]). Also, decision rules for coding each variable need to be made explicit, since even the most straightforward and clearly defined measures will not fit every case perfectly.

When the codebook is completed, the coding of the cases may begin. Elder et al. (1993) advise a precoding phase utilizing a small portion of the data to see if any unexpected problems arise. Then a code form or summary sheet for each subject is used to record the information of interest, with the order of the variables on the form corresponding to those in the codebook. Finally, transfer of the information to data files is

done. The coded data should be entered two times by different people and compared for accuracy.

To determine the accuracy of the data coding and entry, reliability is assessed. Interrater reliability examines the degree of agreement between two or more coders. In coding archival data, cases should be coded independently by two or more coders. Usually this degree of agreement is calculated on a randomly selected ten percent sample of the data using the kappa coefficient, since kappa measures agreement in nominally coded data, although weighted kappa may be used with ordinal data. Because codes for the present study required very little judgment and the coders were quite accurate, Kappa was not computed for this sample. Criterion validity should also be established, to see the degree of association between the new measures and other more established indicators (if available) of the concept of interest. Once these matters have been attended to, data analysis may proceed.

McCall and Appelbaum (1991) offered additional procedures and steps to follow which may augment Elder et al.'s (1993) process of conducting archival research. For example, if they are doing longitudinal research, the researchers should consider a feasibility matrix of sample x measure x assessment occurrence to determine the nature of the sample, the measures and when the assessments took place. The availability of particular variables at specific points in time may constrain the possible research question. This may also reveal to the researcher the amount of data that is missing from the sample. Depending on the characteristics of the missing data, different steps could be taken. Subjects with missing data could be eliminated (but this is not recommended), group averages could replace missing values (which artificially reduces the variance of the

sample), interpolation or extrapolation could be employed, or analyses not requiring complete data could be used. For the present study, those individuals without a value for a particular variable were excluded from the analysis. This was done because the information was so complete for most of the individuals analyzed. It was clearly noted when this process was undertaken with a particular variable.

These authors strongly state that the entire data set should never be used to form hypotheses or specify analyses. Instead they advocate using a "hold-out sample," or splitting the data into two groups. The first part, approximately two-thirds of the sample, is used to develop the overall strategy, to test *a priori* hypotheses and to conduct exploratory analyses. The remaining one-third of the sample is used to cross-validate hypotheses from the analysis of the first portion of the data set. This was not undertaken in the present study due to the individual case records under analysis were a small subset selected randomly from a much larger sample, and because few actual *a priori* hypotheses were proposed due to the exploratory nature of this study.

Data reduction should also be considered, so that a limited number of variables is being studied. This could be accomplished by eliminating variables with inadequate data or combining related variables to form a specific construct. The variables chosen for the project should be selected in a theory-driven and *a priori* fashion so that their selection is not influenced by the actual data. No data reduction was attempted in the present study. In fact, several variables were expanded to provided more detailed information from the form in which it was originally coded. See below for specifics on this process.

When completing the data analysis, the researcher needs to utilize statistics that fit the question and data available. Enough time needs to be allotted to complete a thorough

analysis, especially since initial analyses usually lead to additional *post hoc* analyses. Thus the researcher may answer more questions with more analyses than had been originally planned. The present study contained several of these *post hoc* analyses. Additional variables were created using the information generated during data collection and further analyses were completed than the ones hypothesized before undertaking the research. See methods and results for complete details.

McCall and Appelbaum (1981) discussed the possibility that limited access to archival data may occur. The owner or collector of the data set often determines to whom and when the data is available. Consideration needs to be given to the details of access so that all parties involved agree to terms such as information and variables released, the domain of inquiry, rights to publish, prepublication review and analysis of questions not originally anticipated. Also important are the ethical considerations which may constrain a research question when planning a secondary analysis of information that was provided or released by subjects for purposes of the original collection only. Often permission is not required for subsequent analysis of data, but the investigator should be made aware of the permission granted originally by the subjects. The researcher should consider the sensitivity of the present analysis and any impact it may have upon the original participants. Patterson and Sechrest (1983) mandated that the researcher do everything possible to protect the subjects from physical and mental discomfort, harm, and danger, which is most effectively accomplished by informing the subjects when possible of all present and potential aspects of the research. Issues related to access to data was encountered in the present study. The research needed to be approved by the Internal Review Board at the University of Montana, after explanation of the benefits of the

research and identification of procedures to assure that no harm would come to those

whose case records were used in the study. Access became an issue again when the patient

case records were removed to the Montana Historical Society Archives in Helena,

Montana. Approval for access to the records in Helena was granted by the Montana State

Archives and the Montana Department of Corrections and Human Services through a

process similar to the Internal Review Board.

Several limitations of archival analysis exist, and the researcher needs to be aware

of them. Missing data is an obvious problem, often caused by a lack of recording the data

or attrition of subjects (Tomlinson-Keasey, 1993). Also, in archival data sets, there may be

a systematic bias in the data content, since outcome tends to be stressed over process.

Cook and Campbell (1979) explained that since archival data are already collected and the

available information is fixed, this inflexibility of the data may cause variables to be

difficult to find or define. In addition, cohort selectivity may be present, especially with

smaller samples, due to a lack of representativeness and to the data set being period- and

culture-specific. Moreover, those working with the data may also lack appropriate or

sufficient training to deal effectively with the data (Brooks-Gunn, Phelps & Elder, 1991;

Hendrickson & Myers, 1973), which results in the leading source of coding error,

improper coding of variables. Finally, the initial discovery of archival data to use which is

relevant to the question of interest is not always easy to achieve (James & Paul, 1993).

These prohibitive issues were not relevant to the present study. Many of the case records

were entirely complete and few variables had missing data. Those variables that were

missing values were not extensively studied and analyses were exploratory in nature, thus

no concessions needed to be made for statistical purposes. The inflexibility of the data and

the period- and culture-specificity of the sample was inherent to the study. Data was desired that accurately reflected the actual practices and persons in the mental health field in Montana between 1920 and 1940. It was assumed this population would be different from those already studied in other areas of the United States, which provided incentive for the project.

The advantages of archival data research tend to outweigh the disadvantages, especially when the limitations are controlled for, minimized or eliminated. Many methodological advantages are present, such as using previously collected data to address original or extended research questions which can then be verified, refuted or refined. Follow-ups and pilot-testing are more easily completed, and question and hypothesis generation can be done before the collection of new data (James & Paul, 1993; Sieber, 1991). Archival data can help to enhance prediction by allowing the study of the precursors and results of infrequent life events, as well as providing an opportunity to reevaluate specific interventions (Tomlinson-Keasey, 1993). The relations between age, period and cohort can be studied (Brooks-Gunn et al., 1991) to see the interactions of life course, developmental stage, and historical or social events. For example, the current study looks at temporal trends in diagnosis. One advantage that many researchers believe far outweighs the limitations is that the use of archival data greatly reduces the reactivity-related threats to construct validity (Cook & Campbell, 1979; Patterson & Sechrest, 1983). Archival research is all retrospective; therefore the subjects are not affected by being observed with respect to the question at hand, and thus the possibility for generalizations to a larger population may be preserved.

<u>Historical Perspectives</u>

When considering mental health archival data, much information can be obtained about patients, admissions, diagnoses, and discharges. It has widely been discovered, dating from as early as the late 1800s to the present (Malzberg, 1949; Meyer & Sprung, 1977; Tsuang, Woolson, Winokur & Crowe, 1981; Willer & Miller, 1977a), that overall admission rates for males and females were equal and that both single and widowed individuals, regardless of gender, had higher admission rates than the married and divorced population in the early 20th century (Brenner, 1973). Also similar across genders were rates of death, transfer, recovery and discharge, and length of stay in the hospital, although males did tend to have higher rates of mania, while females had higher rates of melancholia. Male patients tended to be unskilled laborers and farmers who had higher discharge rates if they had a job to return to, whereas female patients were most often housewives (Willer & Miller, 1977b). In addition, it has been found that the state mental health facilities tended to be utilized more predominantly by those less educated or economically disadvantaged, as those with higher economic status and education attempted to utilized private institutions or in home private care (Brenner). Finally, many injuries, such as exposure or a blow to the head, were common precursors of admission for male patients. By comparison, women tended to have precipitating factors of a sexual nature, such as problems of puberty or pregnancy (Willer & Miller, 1977a).

Grimes (1934) reported in his comprehensive study of American mental health facilities that the trends in the 1930s were moving towards shorter duration of hospitalizations, higher rates of release from the hospital, with almost all of these discharges (97%) occurring within two years of admission, and lowered death rates of

patients in the hospital, although there were also more frequent readmissions to mental health facilities. The early 1900s also saw an increase in the total number of patients in mental hospitals, but especially of persons aged 65 and older, as the old almshouses closed and these people had nowhere else to go (Brenner, 1973; Grob, 1985; Kramer, Goldstein, Israel & Johnson, 1955; Malzberg, 1954). Diseases of the aged, such as senility and dementia, were reframed in psychiatric terms to allow for these people to come under the care of state mental health institutions (Grob).

Trends in diagnosis were also changing in the first half of the twentieth century. By the late 1930s, dementia praecox/schizophrenia was the most common diagnosis for patients aged approximately 55 and younger, while older patients most often were diagnosed with diseases of the senium, which included cerebral arteriosclerosis and senile psychoses (Grob, 1985; Kramer et al., 1955; Malzberg, 1949). Malzberg (1954) also found that the rates of general paresis decreased after 1920 due to better treatment and prevention of syphilis, and that the rate of manic-depression also decreased, after approximately 1930.

Specific Populations

The characteristics of specific populations can also be studied with the use of archival data. Migrants have long been known to be at risk for various psychiatric disorders and social maladjustment (Mavreas & Bebbington, 1989). These problems are often due to stressors related to the move to a new country, such as the relocation itself, loss of family and friends, prejudice or discrimination, and dealing with a foreign language. Immigrant men tended to succumb to the pressure of migration within one to two years of arriving in the new country, as opposed to immigrant women, who usually tended not to

enter a mental health facility until seven to fifteen years after relocation (Westermeyer, 1989). This seems to be due to the fact that immigrant females tended to keep their traditional roles longer by staying and working at home, as opposed to being exposed to the dominant culture on a daily basis. It was found that foreign-born patients had slightly higher rates of all psychoses in the early 1900s and that the most common diagnosis was dementia praecox/schizophrenia (Malzberg & Lee, 1956). In addition, it was determined that in the early 1900s immigrant women had higher rates of manic-depressive syndrome than any group of males or native-born females, while foreign-born men were commonly diagnosed with general paresis or alcohol psychoses (Westermeyer). Italian immigrants were found to show an upward trend in rates of admissions to mental hospitals as the 1900s progressed, whereas Irish and German immigrants had fairly stable admission rates over this period (Brenner, 1973). Immigrants generally were screened for psychiatric disturbances upon entering the country, and if they were deemed to have a mental health problem or later placed too much burden upon the mental health system they were often deported to their native country.

Another specific population of interest is that of Native Americans during the early 1900s. Since state institutions generally would not accept Native Americans because they were considered wards of the federal government and not the concern of state hospitals (Spaulding, 1986), their actual admission rates to state institutions are not known. Based on the 1910 Census, prevalence of mental illness among Native Americans in the United States was 62.5 per 100,000, whereas among the general population it was 229.6 per 100,000 (Willis, Dean & Larsen, 1981). Thus, the actual prevalence of mental illness was presumably lower for Native Americans, although it is possible that this difference may be

an artifact of detection and reporting. This could possibly have been due to a greater

tolerance of deviant ways, a stronger community or family support system and a greater

desire to keep mentally ill family members at home. In addition, Native American patients

many have been routed to specific institutions (see below). For those Native Americans

entering a mental hospital, the most common diagnosis was dementia, followed by

melancholia. There were usually high death rates within these patient populations, and few

individuals were discharged (Spaulding). It was very difficult for Native Americans to

receive adequate mental health care, due to the lack of interest on the part of state

institutions and the fact that Native Americans were a relatively powerless group

(Spaulding; Willis, Dean & Larsen). They were often sent to an institution such as the

Canton Asylum for Insane Indians, in Canton, South Dakota, which operated from 1903

to 1934 and accepted Native Americans from all over the country. Such

institutionalization entailed mainly custodial care, with little or no clinical treatment. This

can be deduced from the number of deaths of in-patients outweighing the number of

discharges.

The Present Study

This study will examine the patient case records of individuals with first admissions

to Montana State Hospital at Warm Springs, Montana from 1920 to 1940 to discover

information about general trends in mental health care, gender differences and specifics

concerning the diagnosis and treatment of immigrants and Native Americans in western

Montana during those years. Variables that will be studied include demographic

information (e.g., age, gender, race, occupation), rates of admissions, diagnoses, duration

of hospitalizations, in-patient deaths, discharges and readmissions. Since no study of this

type has been done with this geographical area and population of interest before, this research should provide new information about the mental health field and practices in Montana between 1920 and 1940.

Based upon studies completed that concern mental health facilities in other areas of the United States during this time period, several possible findings can be expected. These are only tentative expectations, as this area of the United States (the Rocky Mountain West) has not been studied before, and it is not known whether appreciable information will be gathered concerning the Native American population. Admission rates for Native Americans to state institutions have not been calculated, and it was customary to send these patients to Native American health facilities such as the Canton Asylum for Insane Indians during this time, rather than admitting them to local or state hospitals. The tentative hypotheses for this study are as follows:

1. The number of admissions will rise with time in all age brackets, but especially among those 55 and older, which will cause the average age of patients to increase with time.

2. Releases should become proportionally more numerous over time.

3. Death rates should decrease over time, except among those over age 55.

4. The most common diagnosis will be dementia praecox/schizophrenia for those younger than 55, and senile psychoses are expected to be the most prevalent diagnoses among those patients over the age of 55.

5. There will be a marked decrease in both syphilitic psychoses/general paresis and manic-depressive syndrome by the 1930s.

6. Immigrants are expected to have slightly higher rates of hospitalization for all psychoses and the most common overall diagnosis should be dementia praecox/ schizophrenia.

7. Foreign-born females will have higher rates of manic-depressive syndrome than any groups of males or native-born females. Foreign-born males will have higher rates of general paresis and alcohol psychoses than native-born males.

8. The proportions of Native American hospitalizations are expected to be lower than those of other patients.

9. The most common diagnosis for the Native American patients is expected to be dementia.

Method

The present investigation was conducted using archival patient records at the Montana Historical Society Archives in Helena, Montana. Permission to gain access to these patient case records was provided by the Montana State Archives and the Montana Department of Corrections and Human Services. Permission to complete the study was also granted by the University of Montana Internal Review Board (IRB). Information was provided to the IRB as to the benefits of this research and the care that would be taken to assure that no harm would come to patients involved in the study.

Sampling

Terminated patient case records were drawn from a sample of about 6500 files. These files were maintained in alphabetical order in 108 container boxes. Each box contained an average of 68 files. Three records of ordinal placement one through sixty-eight were randomly selected from each box and were retained in the study if the first

admission date occurred between January 1, 1920 and December 31, 1940. Some boxes

contained fewer than 68 records, and many files did not meet inclusion criteria for

admission date; thus, a final sample of only 180 records was constructed. This procedure

is different that the Elder et al. (1993) process of archival data research in that only a small

sampling of the patient case records was taken, thus a percentage did not need to be

reserved to cross-validate hypotheses. The problem of attrition once an individual's case

record was included in the study was not an issue. This was an archival study and

therefore no participants dropped out or were otherwise lost.

A selection bias inherent in the alphabetized patient case records was present, in

that specific ethnicities have common last names, which would be located together in an

alphabetized sample; names beginning with Mc or O' are examples. However, because

files were sampled randomly from each container box, it is assumed that an equal

percentage of these names was included in the present study, compared to what would

have been selected if the files were not alphabetized.

Coding

The data were collected using a standardized coding sheet developed for this study

(See Appendix A). The coding sheet was intended to extract the following types of

information: General demographics, admission information, psychopathological

symptoms, somatic symptoms, treatment, outcome, and subsequent admission

information. In addition to the data that was specified by the coding sheet, information

relevant to the number of children, additional psychopathological symptoms, medication

provided, and cause of death was also recorded. No information was recorded concerning

the patient's name or street address. Case records were referred to by a code number that

had been noted (presumably by library archives staff) on each folder during storage of the files. Care was taken to assure that no identifying information was recorded that could be traced back to specific individuals, because this study did examine sensitive and potentially embarrassing information to the individuals involved.

The quality of the information contained in the case records was quite high and relatively complete for each individual. Thus dealing with missing values was not a great concern for this study. When a value was missing, the corresponding field on the coding sheet and in the data base were left blank. Thus, these individuals were not included in the analysis of that particular variable. When this occurred, it is noted. The records routinely contain demographic information, a summary of the commitment proceedings (if applicable), intake notations, nurse ward notes, and a relatively standardized case report. In addition, there were reports of physical examinations, a photograph of the patient, and often extensive correspondence with family members and other outside agencies concerning the patient. The basic paperwork including face sheets, history forms and test records were standardized and remained quite unchanged throughout the time period studied, 1920 to 1940.

Each patient case record was coded at least once; coding was completed by the principal investigator or one of three undergraduate research assistants. Initial coding was done in a paper form. A checking procedure was used; 111 of the files (62%) were recoded and verified against the first coding sheet to assure accurate data collection. The principal investigator completed the entire verification process. Discrepancies were reconciled by referring back to the information in the actual file, and the correct information was entered onto the coding sheet. Coding errors occurred primarily at the

outset of the data collection and greatly decreased as coders became proficient with the system. All of the initial files were double coded and data verified, with discrepancies being corrected until very few errors were being made. Coding errors were classified as clerical, judgment, or non-response. Clerical errors tended to be transposed numbers in dates or information transcribed into wrong spaces on the coding sheet. Clerical errors occurred 19 times in the 111 files. Judgment errors occurred when raters coded discrepant information within one file, or one rater coding more detailed information than the other. Judgment errors occurred 27 times. Non-response errors occurred when one rater did not record a particular piece of information that the other coder did enter onto the coding sheet. Non-response errors occurred 29 times during the coding process. Because these codes required very little judgment, the coders were quite accurate, and these rates were judged sufficiently low, the remaining cases ($\underline{N}$ = 69) were coded only once.

Data Entry

Information from the coding sheets was then entered into a Paradox-based data entry program. The information was entered according to the numerical code values from the standardized codebook created for this study (See Appendix B). This codebook was ultimately developed to reflect variable values that were actually present within the data. This is another difference from the process of Elder, et al. (1993), in that the codebook for this study was developed after the initial coding sheets were completed. This was due to this being an exploratory study and having few specific hypotheses to test. Instead, an accurate reflection of the data was desired, and the values for each variable were identified as actually being present within the data.

The information from each patient case record was entered by two different individuals, the principle investigator and one undergraduate research assistant, into two separate data files. These data files were then compared and any discrepancies were verified against the coding sheet and correctly re-entered into the data base. Errors made were predominantly comprised of transposed numbers in a particular variable value or data having been entered into the wrong field in the data base.

Data Analysis and Summarizing

The data were evaluated and compared using the SPSS statistical software. A number of the variables coded and entered into the data base were further broken down into more meaningful units, which were also evaluated and compared during the analysis. See Appendix C for a complete list of these additional variables. One specific additional variable requires explanation. When determining the age of each of the patients, it was found that a number of the case records contained only the year, or only the month and year of the individual's birth. When the month and year were provided, it was assumed for computation purposes that the person was born on the 15th of that month. When only the year was provided, for calculation purposes, the individual was assumed to have been born on June 15 of that year. This artificial determination of birth date would skew results relating to season of birth for these subjects; thus, no examinations of that type were performed.

There was no need to eliminate variables because the information within the patient case records were so complete. Also, because this was an exploratory analysis, the research was not bound by *a priori* hypotheses and additional analyses were considered

through the course of the research. This was the reason for the development of additional variables with more meaningful units.

Summary statistics are provided on a number of variables. In addition, comparisons are made of males and females, various ethnic groups, various diagnosis groupings, and several temporal trends are examined. A hope of this study was to examine the difference between Native American and other patients in this sample. This analysis was unable to be completed due to an insufficient number (N = 4) of Native American persons in the research sample.

Results

Patient Demographic Information

Of the 180 patient case records analyzed, males constituted 74% and females 26% of the sample. The racial groups consisted of Caucasian (90.6%), Native American (2.2%), African American (1.7%), Asian (1.1%), Hispanic (1.1%), Pacific Islander (.6%), and unknown (2.8%). The ages of the patients at first admission ranged from less than a year old to over eighty-eight years of age. "Mentally deficient" infants were often admitted to the hospital when their families were unable to care for them or when their mothers had died. The most common ranges of age at admission were ages 40 to 50 (19.4%), and ages 30 to 40 (18.9%; see Figure 1). The average age of patients upon admission was approximately forty-eight.

Of those individuals whose ethnicity was provided, the most common ethnic groups were Irish (12.8%), German (9.4%), and Swedish (5.0%). See Table 1 for a full description of ethnic groups. Additional analyses of ethnicity were conducted with patients classified according to general region of ethnicity. This general ethnic region was

not specifically region of birth because a number of patients were classified with an ethnicity that was different from their country of birth. The more common categories were Western European (31.7%), Scandinavian or Northern European (10.6%), and North or Central American (4.4%). Of the records studied, 46.1% were not given an ethnic classification due to a lack of sufficient information (See Table 1 for complete description).

When primary language was considered, 85% of the sample was found to speak English (See Table 2 for complete description). When making additional comparisons, a Western European or Scandinavian language was spoken by 6.7% of the patients. No language was spoken by 1.7% of the individuals, who were most likely to be infants (See Table 2 for full description).

Religious affiliation was available for 76.1% of the sample. The more common religions represented were Roman Catholic (28.3%), Protestant (11.7%), and Lutheran (8.3%). In addition, 6.1% of the patients did not subscribe to any religious beliefs. For full information on religious affiliation, see Table 3.

Of the individuals in the sample, 38.9% were married, 37.2% were single, and the others of varying marital status (See Table 4 for full description). When considering offspring, 36.7% of the records indicated that the patient had children, while 7.8% did not. The other 55.6% files did not indicate the presence or absence of children.

Social class was determined for individuals in the sample by considering their payment status at the hospital. Patients were classified as indigent or non-indigent upon admission. Non-indigent patients had a source of funding outside of the hospital which paid for their care. Indigent patients had no source of funding and were maintained by the

state. Indigent individuals comprised 78.9% of the sample and non-indigent 20.6%.

Unknown payment status was listed for .6% ($\underline{N}$ = 1) of the individuals studied.

It was found that 80.6% of the individuals were literate, while 13.8% were

illiterate. Literacy was not indicated for 5.6% of the patients. Of those patients over 10

years old ($\underline{N}$ = 174), 82.8% were literate, 11.5% were illiterate, and 5.7% were not

provided with information regarding literacy. Some common school education (less than

eight years of schooling) was achieved by 33.3% of the sample. Another 16.7% received

eight years of education and graduated from common school. An additional 10.0% of the

patients had no formal education at all. For a full description of education, see Table 5.

The town of residence was coded for each individual. The most common towns of

residence were Butte (14.4%), Helena (8.9%), and Great Falls (5.6%; see Table 6). No

further classification of town of residence was undertaken, as the county of residence for

each patient was also determined. The three most common counties of residence for the

sample of patients were Silver Bow (15.6%), Lewis and Clark (8.9%) and Cascade

(7.2%). For a full description of county representation, see Table 7. Counties were then

reclassified as additional variables according to regional location within the state. See

Table 7 for full description of regional location of each county. Counties in the Southwest

region of the state accounted for 42.8% of the patients. Another 15.6% resided in the

North Central area of Montana. Additional areas and corresponding proportions of the

individuals were South Central (14.4%), Eastern (12.2%), and Western (12.2%). An

additional 2.8% of the patient case records did not contain sufficient information to

classify the county of residence.

The amount of time that he or she had resided in the state of Montana was listed for 87.2% of the patients. Of those individuals in which their time in Montana had been recorded, 19.4% were determined to have lived in Montana less than five years before their admission to Warm Springs Hospital. Another 11.7% of the patients had resided in the state between six and ten years before their admission. The amount of time patients had resided in Montana ranged from less than one year to over sixty-five years (see Figure 2 for a complete description).

Each patient's occupation was coded and it was found that 68% of the sample over ten years old had been employed just prior to admission to the hospital. The most common employment positions were housewife (16.7%), farmer (13.3%), general laborer (11.7%), and miner (6.1%). For a full description of occupations, see Table 8. Occupations were additionally classified into several more general categories (See Table 8 for full description of each new classification). Laborers constituted 30.6% of the sample; this category included employment such as carpentry, gardening, mining, and railroad work. Agriculture and ranching made up another 18.3% of the patients. Another 16.7% of the individuals were housewives. Service employees accounted for 15.6% of the sample; this included employment such as housekeeping, fire fighting, plumbing and sales. Attorneys, nurses and teachers made up the professional category, accounting for 1.7% of the sample. Patients without employment comprised an additional 16.7% of the sample and were categorized as convicts, students, retirees, infants, or otherwise unemployed. Sufficient information was unavailable for .6% ($\underline{N}$ = 1) of the sample to determine a classification of occupation.

Patient's place of birth was initially classified into four groups: outside of the United States (26.7%), a US state other than Montana (57.8%), the state of Montana (13.3%), and unknown (2.2%). Place of birth was examined in addition to ethnicity, because a number of patients were born in countries different from their described ethnicity. Of those individuals born outside of the United States, the two most common countries of nativity were Sweden (3.9% of the total sample) and Germany (2.8%; See Table 9 for full description). When classifying the countries of birth according to region the most common areas were Western European (11.7% of the total sample), Scandinavian (7.8%), and Eastern European (3.9%). See Table 9 for a complete description. For those individuals who were born in a US state other than Montana, the most common locations were Wisconsin (6.7% of the total sample), Michigan (5.0%), and Iowa (5.0%; See Table 9 for a complete description). When classifying the states of birth according to region, the most common areas were the Midwest (30.0% of the total sample), Plains states (11.1%), and East Coast (7.8%; See Table 9). Common places of birth within the state of Montana were Butte (2.2% of the total sample) and Helena (2.2%; See Table 9). Of the patients who were born within the state of Montana, the most commonly represented towns were Butte and Helena (2.2% of the entire sample, each). When classifying the state of Montana locations of birth, Western Montana accounted for 7.8% of the entire sample, and Eastern Montana accounted for 3.3% of the entire sample. An additional 2.2% of the patients were listed as being born in the state of Montana, but with no specific town provided.

In addition to general location of birth, the regions of birth for those patients who were Caucasian and non-Caucasian were compared. Of the sample, 90.6% were Caucasian

($\underline{N}$ = 159), 6.7% were non-Caucasian, and 2.8% were not classified. It was found that 26.7% of the sample was foreign-born, 71.1% of the sample was native-born, and 2.2% were not determined. Of those who were Caucasian ($\underline{N}$ = 159), 71.7% were native-born, and 28.3% were foreign-born.

Gender Differences. Of the 180 patient case records analyzed, males made up 74% and females 26% of the sample. Caucasians constituted the majority of males (89%) and females (94%; see Table 10 for a complete description). The ethnicity of males was most commonly Irish (15%) or German (9%), and females were German (10.6%; see Table 11). The most common religious affiliations were Roman Catholic (30% males, 23.4% females) and Protestant (10.5% males, 14.9% females; see Table 12). Women were most commonly married (53.2%) or widowed (21.3%), while men more often were single (44.4%) or married (33.8%; see Table 13). The occupations of the female patients were most commonly housewife (66%), and unemployed (12.8%); those of the male patients were agriculture or ranching (24.8%), and laborer (41.4%; see Table 14). Social status was determined to be predominantly indigent for both groups, males (80.5%) and females (74.5%). Males were found to have lived in Montana for an average of 20.9 years, while females tended to have lived in Montana 20.1 years before their first admission. These values are not significant, $\underline{t}(72)$ = .267, $\underline{p}$ = .791.

Parental Information

When considering the occupation of the patient's parents, insufficient information was provided to classify 93.3% of the fathers and 97.8% of the mothers. Parents' place of birth revealed more detailed information about each individual's parents. The locations of birth for the fathers were classified into four groups: outside of the United States (48.9%),

a US state other than Montana (31.1%), the state of Montana (.6%), and unknown (19.4%). Of those fathers born outside of the United States, the two most common countries of nativity were Ireland (10.0%) and Germany (9.4%; see Table 15 for full description).

When classifying countries of fathers' birth according to region, the most common areas were Western Europe (28.3% of the entire sample) and Scandinavian countries (8.9%; see Table 15). For those fathers who were born in a US state other than Montana, the two most common states were Massachusetts and Pennsylvania (each 2.8% of the entire sample). When classifying fathers' non-Montana states of birth according to region, the most common areas were the Midwest (15.6% of entire sample) and the East Coast (7.2%; see Table 15). Only .6% ($\underline{N}$ = 1) of the fathers were born within the state of Montana, and the location for that father was Stevensville.

The locations of birth were also classified for the mothers, using the same four groups: outside of the United States (41.1%), a US state other than Montana (35.0%), the state of Montana (1.7%), and unknown (22.2%; see Table 15). Of those mothers born outside of the United States, the two most common countries of nativity were Germany (8.9% of entire sample) and Ireland (7.2%; see Table 15).

When classifying mothers' countries of birth according to region, the most common areas were again Western Europe (23.9% of entire sample) and Scandinavian countries (8.3%; see Table 15). For those mothers who were born in a US state other than Montana, the most common were Ohio (3.3% of the entire sample), and Illinois, Michigan, and Wisconsin (each 2.8%). When classifying mothers' non-Montana states of birth by region, the most common areas were the Midwest (18.9% of the entire sample)

and the East Coast (18.9%). Mothers who were born in the state of Montana were born in Bozeman and Stevensville (.6% ($\underline{N}$ = 1), each).

Admission and Symptom Information

Of the 180 patient case records analyzed, 98.9% of the individuals entered the hospital under an involuntary admission, while the other 1.1% voluntarily admitted themselves. The physicians most commonly completing assessments and the proportions of patients being seen by those doctors were Dr. A (28.3%), Dr. B (22.2%), and Dr. C (18.9%; see Table 16). The names of the doctors were omitted to provide for their confidentiality. When examining years of admission, it was found that the most frequent admissions occurred during 1929 and 1937 (7.8% each), and 1920 (7.2%). For a complete description of dates of admission, see Figure 3.

When examining precipitating factors contributing to admission, the most frequently occurring factors were presenility or senility (22.2%), syphilis (12.2%), and alcoholism (11.7%). Insufficient information was provided to classify another 24.4% of the sample on a precipitating factor. See Table 17 for detailed information on precipitating factors.

The age at which the patient began exhibiting symptoms was recorded for 88.3% of the case records. For these individuals, the youngest age of symptom onset was at birth, and the oldest was at eighty-six years old. It was found that the two most common age ranges for symptom onset (regardless of when actually admitted to the hospital) were ages 41 to 50 (17.8% of the entire sample) and ages 31 to 40 (13.9%). See Figure 4 for a full description of age ranges of symptom onset.

Symptoms upon admission were provided for each of the patients. Information

detailing the symptoms as primary, secondary, etc. was not provided; thus, as many as the

first three symptoms for each patient were coded, if provided in the record. The most

common individual symptoms were mental deterioration (composed of decline in memory,

decline in judgment, disorientation, irrationality and/or incoherence; 46.1%), hallucinations

of an unspecified type (27.2%), and delusions of an unspecified type (23.3%). See Table

18 for a complete description of these symptoms. Totals for symptoms in this table will

exceed 100% because some patients were listed with up to three symptoms. Classification

of the specific symptoms was also undertaken to create more general categories of related

symptoms. Examples of these general categories include combining depression and

melancholia; considering suicidality and violence as one group; and, collapsing over all

varieties of hallucinations (auditory, visual, and not otherwise specified). See Table 18 for

a full description of these groupings. Again, totals for these symptoms groups will exceed

100% because patients were assigned up to three symptoms. As these categories were

constructed, the three most common groups of symptoms were delusions (56.7%), mental

deterioration (46.1%), and hallucinations (38.3%).

Upon admission, the somatic condition of the patient was often recorded. Out of

the case records examined, 46.7% indicated a somatic condition of the patient. The more

common conditions included syphilis (33.3% of records providing data), epilepsy,

convulsions or seizures (19.0%), and paralysis or a crippling condition (14.3%; see Table

19).

A primary diagnosis was provided for all but one of the patients, a female, who

died almost immediately after admission and with whom an assessment was evidently

never undertaken. The three most common specific diagnoses were manic depressive -

depressed phase (10.6%), general paresis or paralysis of the insane (6.7%), and senility

with psychosis (6.7%; see Table 20). Classification of specific diagnoses was also

undertaken to create more general categories of related diagnoses. Examples of these

general categories include collapsing over various forms of dementia praecox and

schizophrenia; combining all diagnoses related to senility; and, considering all diagnoses

related to syphilis as one category. See Table 20 for a complete description. After these

general categories were created, several groups stood out. These included various forms

of manic depressive disorder (18.3%), diseases of the aged or senility-related (15.0%), and

syphilis-related diagnoses (12.2%). Examination of primary diagnosis categorized by age

group reveals that patients under the age of 55 were most commonly diagnosed with

manic-depressive disorder, while patients over the age of 55 were most frequently

provided an aged or senility-related diagnosis (see Figure 5). For the purposes of this

study, all diagnoses related to senility were grouped together, which includes senile

psychoses. Based upon this consideration, these findings agree with Hypothesis 4 that

senile psychoses were expected to be the most prevalent diagnosis for patients over the

age of 55. This hypothesis is not supported in that it predicted dementia praecox or

schizophrenia would be the most frequent diagnosis for those under age 55, and this was

not found to be true.

An additional diagnosis was provided for a small number of patients; 2.8% were

provided with a secondary diagnosis related to syphilis, and 3.9% were provided various

others. The remaining patients did not have another condition or disorder diagnosed (see

Table 21).

Revised diagnoses were made for five (2.8%) of the patients in this sample, all of whom were male. The first patient was changed from #232 alcoholism to senile psychosis with simple deterioration at age 86 and whose original condition had been diagnosed at age 81. Several of the case records contained numbers before the diagnostic category. It was never determined of what this code system consisted. The second revision was from arteriosclerosis with acute mania at age 52, to psychosis with arteriosclerosis at age 59. A man who was originally diagnosed at age 61 with senility with mental deterioration was rediagnosed with senile psychosis or senility at age 66. Another revision was made from manic depression - depressed phase at age 43 to dementia praecox-hebephrenic type at age 45. The final change was for a man who was initially diagnosed with dementia praecox at age 32 and rediagnosed at age 34 with schizophrenia. No revisions of secondary diagnoses were indicated in the case files.

Gender Differences. Of the patients in this sample, all of the females were involuntarily committed, as were most males, with the exception of 1.5%, who committed themselves voluntarily to the hospital. The physicians most often completing intake assessments for the male patients were Drs. A (37.6%) and B(29.3%); the females more often were seen by Drs. C (66%) and D (14.9%; see Table 22). It is interesting to note that Dr. C was the only female physician at Montana State Hospital at that time. When examining precipitating factors contributing to admission, the most frequently occurring factors for men were senility or presenility (22.6%), syphilis (14.3%), and alcoholism (13.5%). The more frequent contributing factors for females were senility or presenility (21.3%) and female complications such as childbirth or menopause (17%); see Table 23). It was found that females first manifested symptoms at an average age of 43.6, while

males were somewhat older, at 45.3 years of age. These differences are not significant, $t(79) = .463$, $p = .645$. When considering classifications of symptoms at admission which were collapsed over several variables, females were found most frequently to suffer from delusions (55.3%), hallucinations (51.1%), and mental deterioration (34%). Males also suffered commonly from delusions (57.1%), mental deterioration (50.4%), and hallucinations (33.8%; see Table 24). The totals for symptoms in this table will exceed 100% because some patients were listed with up to three symptoms. The primary diagnoses provided to patients were similar across gender groups. Females were frequently diagnosed with manic depressive disorder (29.8%), various psychoses (12.8%), or a condition related to the aged or senility (12.8%). Males commonly had a diagnosis of aged or senility-related (15.8%), manic depressive disorder (14.3%), or with a condition related to syphilis (14.3%; see Table 25). The groupings for diagnosis were further collapsed into categories. These were psychoses and dementia praecox/schizophrenia; manic depressive, mania and hysteria; senility and aging; substance abuse; organic conditions, including syphilis, heart disease and epilepsy; and, other diagnoses, including other psychological diagnoses, mental deficiency, and others. Analysis of these categories revealed no significant differences, Chi-Square (5) = 6.56, $p = .26$, although there is some question as to the utility of these particular groupings.

Hospitalization Information

The indication of treatment(s) provided to patients in this sample was relatively uninformative. Many individuals were recorded as having "general" treatment (87.8%), which appeared to be general maintenance at the hospital and little more. When other specific treatments were indicated, these included alternating treatment (mercury and

salversan) for syphilis (6.7%), exam or surgery for those patients not under psychiatric care (2.2%), or restraints (2.2%; see Table 26). Medications provided to the patients were often also indicated. Up to four different medications for an individual patient were recorded in the records. The more common medications were magnesium sulphate and cascara. These were provided to 51.1% and 20% of the patients, respectively. See Table 27 for a complete description of medications provided to patients. Totals for medications will exceed 100% because some patients were given up to four different medications. Of the patients, 26.7% had no indication of medication provided to them listed in the case record.

Outcome of the hospitalization varied across patients. Death was the most common outcome, with 48.3% of the patients dying while in the hospital. Another common outcome was parole (32.8%), in which the patient was given a conditional release. If the patient was not returned to the hospital within about twenty years, the conditional release was changed to a discharge, attributing the patient to being "recovered." Another common outcome was escape (8.9%; see Table 28). The length of stay for these patients during their first (or only) admission ranged from two days to over eighteen years. The average length of stay was approximately 19 months for the patients in this sample.

The cause of death was recorded for each of the patients who died in Warm Springs Hospital (48.3%). The most frequent listed causes of death were cerebral hemorrhage or apoplexy (6.7% of entire sample), general arteriosclerosis or arteriosclerosis with hypertension (5.6%), and chronic myocarditis (5.6%; see Table 29). Classification of cause of death was also undertaken to create more general categories of

related causes of death. Examples of these general categories include combining all causes of death related to kidney disease; collapsing over remaining general medical conditions; and considering diseases of the aged as one category. See Table 29 for a complete description. After these general categories were created, the more frequent groupings for cause of death were heart disease-related (16.1% of entire sample), cerebral hemorrhage or apoplexy (6.7%), and, syphilis-related (5.0%).

Gender differences. The outcomes of the admission for females were death (55.3%) or parole (44.7%). Males had common outcomes of death (45.9%) and parole (28.6%), though also used escape (12%) as a means out of the hospital. See Table 30 for a complete description. Of the male patient case records in this sample, 48.9% died in the hospital. The more common causes of death were heart disease-related (17.3% of entire male sample), lung disease-related (6.8%), and cerebral hemorrhage (6.8%). When examining the females, 55.3% were found to have died in the hospital. The most frequent cause of death for females was heart disease-related (12.8% of entire female sample; see Table 31).

Subsequent Admission Information

First subsequent admission. Twenty-three individuals whose case records were analyzed in this study (12.8% of the sample) were re-admitted to Montana State Hospital. Males made up 60.9% and females 39.1% of these readmitted patients. Only one of these patients (4.3% of the subsequently admitted patients) was admitted voluntarily. The other 95.7% were committed to the hospital. Information concerning symptoms was provided for only 73.9% of the readmitted patients. These descriptions tended to contain rather scant information. Often it was only noted that no changes had been determined from the

original admission information. Therefore, much information regarding subsequent

admissions is based upon original admission paperwork. Delusions and hallucinations were

each experienced by 35.3% of the total sample of readmitted patients. An additional

29.4% of these patients also suffered from mental deterioration. For complete information

see Table 32. Totals for symptoms in this table will exceed 100% because some patients

were listed with up to three symptoms. A primary diagnosis was provided for each of

these patients. The more frequent diagnoses were manic-depressive disorder (21.7%) and

dementia praecox or schizophrenia (17.4%; see Table 33). Additional diagnosis

information was provided for two of these patients. They had secondary diagnoses of

#163 neurasthenia, and psychoneurosis-psychasthenic type. A revision of the initial

diagnosis made upon readmission was provided for two of these patients, both of whom

were male. The first man was originally diagnosed with schizophrenia - paranoid type at

age 43 and was rediagnosed manic-depressive psychosis - manic type at age 44. The other

man was initially diagnosed with alcoholism with psychosis at age 35, but was rediagnosed

at age 37 with dementia praecox - simple type. He was rediagnosed once again, with

dementia praecox-hebephrenic type, although a date was not listed. No revisions of

secondary diagnoses for the first subsequent admission were indicated in the patient case

records.

Each of the readmitted patients was provided with "general" treatment during the

course of their stay in the hospital. These patients were provided with medication doses of

magnesium sulphate (43.5%), cascara (4.3%), and morphine (4.3%). In addition, 52.2%

of the patients were not provided with any medications at all. These percentages total in

excess of 100% because one patient was provided with dual medications. Most of these

patients were paroled (47.8%), while others escaped (21.7%), died in the hospital (17.4%), were discharged without parole (8.7%), or were transferred to another institution (4.3%). Four patients actually died during their first subsequent admission. Their causes of death were arteriosclerotic gangrene, myocarditis, cerebral hemorrhage, and trauma to the body (4.3% of the readmitted sample, each).

Second subsequent admission. Eight individuals whose case records were analyzed in this study (4.4% of entire sample) had a second readmission to the hospital. Males and females each made up 50% of this sample. None was admitted voluntarily. Information regarding their symptoms was provided for six of the eight twice-readmitted patients. Depression was the most common, suffered by four of the patients (50%), followed suicidality or violence (37.5%; see Table 34). Totals in this table will exceed 100% because some patients were listed with up to three symptoms. A primary diagnosis was provided for each of these patients. The diagnoses were manic depressive disorder (37.5%), other psychological disorder (25%), and epilepsy-related disorder, syphilis-related disorder, and dementia praecox or schizophrenia (12.5%, $N = 1$, each). One patient was provided with a secondary diagnosis of psychoneurosis - psychasthenic type. A revision of the initial diagnosis made upon the second readmission was provided for only one male patient. He had originally been diagnosed with general paresis of the insane at age 48, but was given a revised diagnosis at age 61 of psychosis with syphilitic meningo-encephalitis. This revision of diagnosis reflects the course of syphilis, as the revised diagnosis is a more severe and complicated presentation of syphilis. No revisions of secondary diagnosis for patients with two readmissions were indicated in the case records.

Each of these twice-readmitted patients were provided a "general" treatment. Six of these individuals were administered medications upon admission. These were magnesium sulphate (50%), and cascara (25%). No other medications were provided. Outcomes of these second readmissions were found to be parole (50%), escape (25%), and death (25%). The two individuals who died during their second readmission had listed causes of death as third degree burns to the body and paresis or paralysis of the insane.

Third subsequent admission. Three individuals whose case records were analyzed in this study (1.7% of entire sample) had a third readmission. Two of these patients were males (66.7%) and one was female (33.3%). One male was admitted voluntarily; the other two were committed to the hospital. Little information was provided for these patients regarding their third readmission. It was determined that common symptoms were violence (66.7%, $N = 2$), and delusions, mental deterioration, paranoia or depression (33.3%, $N = 1$, each). These values exceed 100% because some patients were listed with up to two symptoms. A primary diagnosis was provided for each of these patients. These diagnoses were epilepsy with mental deterioration, psychoneurosis, and paranoid condition (33.3%, $N = 1$, each). A secondary diagnosis of psychoneurosis was provided for one of these individuals (33.3%, $N = 1$). No revisions to primary or secondary diagnoses for patients with three readmissions were indicated in the case records.

Each of these patients who were readmitted three times received "general" treatment. Two (66.7%) were administered magnesium sulphate upon admission; the other received no medication. Outcomes of these third readmissions were found to be parole (66.7%) and escape (33.3%). None died while on their third readmission.

Fourth subsequent admission. Two individuals whose case records were analyzed in this study were readmitted to Montana State Hospital four times. One was male and one was female. Both were committed involuntarily to the hospital. Little information was provided about these patients on their fourth readmission. It was determined that a common symptom for both was violence, and one patient each experienced mental deterioration and paranoia. A primary diagnosis was provided for each of these patients. One received a diagnosis of epilepsy with mental deterioration, and the other paranoid condition. No secondary diagnosis, or revisions to primary diagnosis for patients with four readmission were indicated in the records.

Each of these patients who was readmitted four times received "general" treatment. Both also were administered with magnesium sulphate upon admission. The outcome for this fourth readmission was determined to be parole for one patient, and death caused by complications due to epilepsy for the other.

Analysis of Specific Sub-Populations within the Sample

Immigrant and Native Born Patients. Native born individuals, those born in the United States, made up 71.1% of the case records analyzed, while foreign born patients made up another 26.7%. A small percentage, 2.2%, of the patients did not have sufficient information to determine location of birth. Of the immigrants, 72.9% were male and 27.1% were female. Of the native born patients, 74.2% were male and 25.8% were female. Immigrants tended to be single (37.5%) while native born patients were more commonly married (42.2%; see Table 35). Those patients born outside of the United States tended to have employment in areas such as labor (33.3%) and agriculture or ranching (22.9%), while patients born in the US were more commonly laborers (30.5%) or

service employees (17.2%; see Table 36). Precipitating factors contributing to admission

for these two groups were very similar, including senility or presenility, syphilis, and

alcoholism (see Table 37). Presenting symptoms upon admission were similar for these

groups as well. Delusions were the most common for both native born (53.1%) and

immigrant (66.7%) patients. See Table 38 for complete information.

Primary diagnosis was also determined for each of these individuals. Foreign born

patients tended to be given diagnoses related to senility (22.9%) or manic-depressive

disorder (16.7%); this is not consistent with the expectation in Hypothesis 6 that

immigrants will be given the diagnosis of dementia praecox/schizophrenia most frequently.

Native born patients were frequently given diagnoses of manic-depressive disorder

(19.5%) and those related to syphilis (13.3%). Upon further exploration, it can be seen

that 8.3% of immigrants were diagnosed with one of a variety of psychoses, while 7.8% of

native born patients were given the same diagnoses. This upholds Hypothesis 6, that

immigrants are expected to have slightly higher rates of diagnosis of psychoses (see Table

39). These diagnoses for immigrant and native patients were further collapsed into groups

of psychoses, dementia praecox and schizophrenia; manic-depressive, mania and hysteria;

senility and aging; substance abuse; organic conditions; and, other. The distribution of

these diagnostic groupings in these two groups was not significantly different, Chi-Square

(5) = 9.03, p = .11. Outcome of the hospitalization was also similar; death was the most

common outcome for both foreign born (56.3%) and native born (45.3%) patients. There

was a greater incidence of alternative outcomes for the native born patients, with a lesser

prevalence for immigrants (see Table 40). The most common cause of death, heart

disease-related, was the same for both groups, native born (12.5%) and foreign born

(27.1%). Other frequent causes of death for foreign born patients were syphilis-related diseases (6.3%) and other general medical conditions (6.3%). Native born persons experienced lung disease conditions (7.8%) and cerebral hemorrhage (7.0%) as common causes of death. See Table 41 for detailed information.

Gender differences between immigrants and native born patients were also studied. The foreign born group was composed of 72.9% males and 27.1% females. Native born individuals were made up of 74.2% males and 25.8% females. No significant differences were found between males and females by native or immigrant status, Chi-square (1) = .00096, p = .86. To examine Hypothesis 7, the study considered the primary diagnoses of immigrant and native born males and females. Manic-depressive syndrome was hypothesized to be more prevalent for immigrant females than any other group. This did not occur as 23.1% of immigrant females were provided this diagnosis while 33.3% of native born females were also given the same diagnosis. Thus the hypothesis that immigrant females would have higher rates of manic-depressive syndrome was not borne out. General paresis (syphilis) and alcohol-related diagnoses were hypothesized to be more prevalent for immigrant males than native born males. This also did not occur as 8.6% of immigrant males and 16.8% of native born males were diagnosed with general paresis/syphilis, and 11.4% and 12.6%, respectively, were given diagnoses related to substance abuse (see Table 42). These diagnoses were also collapsed into further groups of psychoses and dementia praecox/schizophrenia; manic depressive, mania and hysteria; senility and aging; substance abuse; organic conditions; and, other. Analysis of properties of patients in these groups revealed no significant differences, Chi-Square (5) = 7.68, p = .18. Again, there is some question as to the utility of these particular summary categories.

Rural and Urban Patients. A differentiation between rural and urban town of

residence was made for each of the individuals in this study. Urban areas were considered

to be the towns of Anaconda, Billings, Butte, Great Falls, Helena, and Missoula. All

others were considered rural towns. This differentiation was made based upon the 1920

and 1930 United States Census information, which classified these six towns as urban. The

other towns were assumed to be rural due to a lack of this classification in the census

information. It was found that 41.1% of the sample came from urban areas, 52.8%

originated in rural areas, and 6.1% of the sample did not contain sufficient information

about town of residence to make this determination. Urban patients consisted of 67.1%

males and 32.9% females. Rural persons were 77.8% male and 22.2% female. No

significant differences were found between males and females by rural or urban status,

Chi-Square (1) = 5.64, p= .12. When considering marital status, rural persons were most

likely to be married (36.4%) or single (36.4%), whereas urban patients frequently were

married (42.9%; see Table 43). Those individuals from rural areas commonly held jobs in

fields such as labor (33.3%) and agriculture and ranching (28.3%). Urban patients tended

to works as laborers (25.7%) or service employees (25.7%; see Table 44). Precipitating

factors contributing to admission for these two groups were similar in that senility or

presenility was common for both rural (22.2%) and urban (25.7%) persons. Rural patients

also suffered from syphilis (13.1%), while urban individuals presented with alcoholism

(17.1%. see Table 45). Presenting symptoms upon admission were similar as delusions

were most common among rural (57.6%) and urban patients (55.7%; see Table 46).

Primary diagnosis was also determined for each of these individuals. The most frequent

diagnosis was manic-depressive disorder for rural individuals (20.2%) as well as urban

persons (17.1%; see Table 47). These diagnoses for urban and rural patients were further collapsed into groups of psychoses, dementia praecox and schizophrenia; manic-depressive, mania and hysteria; senility and aging; substance abuse; organic conditions; and, other. Differences in diagnosis by rural-urban groupings were not significant, Chi-Square (5) = 7.68, p = .18. Again, there may be some question as to the usefulness of these particular groupings. Outcome of hospitalization was determined to be most commonly death for both urban (54.3%) and rural (47.5%) persons, followed by parole for persons living in urban (37.1%) and rural (30.3%; see Table 48) areas. It is interesting to note that 12.1% of rural individuals escaped from Montana State Hospital, while only 1.4% (N = 1) of urban individuals escaped. The most common cause of death was heart disease-related for both urban (22.9%) and rural (13.1%) residents. See Table 49 for more detailed information.

Gender differences between rural and urban individuals were also studied. The rural group was composed of 77.8% males and 22.2% females. The urban group consisted of 67.1% males and 32.9% females. The marital status for rural males was most frequently single (41.6% of rural males), and rural females were most commonly married (54.5%). Urban males were most often single (44.7%), and the urban females were found to commonly be married (52.2%; see Table 50). When looking at primary diagnosis it was found that urban males were most often provided with a diagnosis of substance abuse (19.1% of urban males) and urban females were manic-depressive syndrome (26.1%). The primary diagnosis of rural males was most frequently aged or senility-related (18.2%) and for rural females, manic-depressive syndrome (36.4%; see Table 51).

Native American Individuals. No analyses were undertaken concerning Native

American patients in this sample. This is due to a lack of sufficient Native American

persons ($\underline{N}$ = 4). Therefore, Hypothesis 8 and Hypothesis 9 were not explored.

Changes in Factors Over Time

Several expectations regarding the data were explored relating to changes over

time. Two of these relate to outcome of the hospitalization for the patient. Specifically,

Hypothesis 2 and Hypothesis 3 dealt with releases and death rates over time. It was

determined that the number of releases did not become more numerous over time (see

Figure 6), although this information is based upon actual numbers and not percentages of

admissions. When considering outcome status as a percentage of admissions (see Figure

7), again the number of releases did not become more numerous over time, although there

was a peak for the year 1939. Thus, it was concluded that Hypothesis 2 was not

supported. Hypothesis 3 stated that death rates would be expected to decrease over time.

This appears to be the case for both actual numbers and percentages of number of

admissions per a given year for the last several years of the time period studied, although

this appears to be relative to the years just prior. These death rates may not be much

different from those observed in the first half of the time period studied. Thus, it was

concluded that Hypothesis 3 was upheld, when considering those years in comparison to

those just preceding them. Changes in diagnoses in time were also explored; Hypothesis 5

had predicted that a marked decrease in syphilitic psychoses and manic-depressive

syndrome would be seen within this data set over the course of time. Analysis of Figure 8

indicates Hypothesis 5 is not upheld; both syphilis-related diagnoses and manic-depressive

syndrome have a variable course over time, with relative peaks occurring in the 1930's.

Discussion

Examination of the patient case records from Montana State Hospital between the years 1920 and 1940 revealed a variety of findings. Basic demographic information was determined for the sample of patients studied. These patients were primarily English speaking Caucasians, surprisingly, almost three-quarters of whom were male. This was unexpected as females have traditionally been the individuals to make use of mental health services. The ages of patients ranged from less than a year old to over eight-eight years of age; patients ranged from infants to elderly individuals. Many of these patients were indigent and relied upon the state to pay for their care. Almost all were admitted involuntarily.

This study also revealed information about the field of mental health and its practices, at least in a state-run institution, in the state of Montana between 1920 and 1940. Little detailed information was provided on symptoms or the process of making a specific diagnosis. It is unclear from the patient case records how a physician went through the process of ruling out other diagnoses and settling for the one that was ultimately bestowed upon the individual patient. Treatment did not appear to be a priority for the patients at the hospital. Most patients were listed as receiving "general" treatment, although nowhere was this term specifically defined. It appears that at that time, physicians and psychiatrists did not hold much hope for therapeutic techniques to cure or rehabilitate patients. The fact that, as far as the records show, patients were not assessed for recovery before being released upon parole is a good indicator of this. No descriptions of therapeutic methods or strategies were discovered, nor were any indications of individual sessions with the doctors noted in the files. Montana State Hospital during this

time period appeared to focus upon institutional or custodial care rather than providing therapy or rehabilitation for the patients. This can be seen in the large number of deaths that occurred for patients who were being maintained at the hospital and never released. The lack of the provision of therapy can also be seen in the number of individuals, who after being released on provisional parole, never pursued or were provided with follow-up care. This may also reflect the relative recency of emphasis upon "aftercare" in medicine in general. These patients were discharged a number of years later due to being "recovered" if they were not returned to the hospital in violation of the provisional parole. It may have been that the field of mental health held a very pessimistic view of the prognosis of these patients and did not expect many to recover. Thus they did not assess for recovery before release and did not grant full discharge until the patient had demonstrated that he or she no longer needed the services at the hospital.

The relatively low number of readmissions and a stable rate of death of patients in the hospital may also point to the use of Montana State Hospital as a custodial care facility. This may seem to indicate that most patients were maintained in the hospital until they died, or possibly that those who were released may not have been mentally ill to begin with, and so would not require additional time in the hospital.

The lack of revised diagnoses may also shed light on the practices during that time. It appeared that after a patient was evaluated upon admission and was rendered a diagnosis, he or she was not regularly re-examined by the doctors. A re-evaluation seemed to be undertaken only when the patient was presenting a problem to the hospital community and these behaviors were brought to the attention of the doctors. This was evident in several of the patient case records as notations of disruptive behavior by nurses

were cited as reasons for re-evaluation by the doctors in their reports. The doctors appeared to make regular individual visits with the patients on the wards only in the event of a severe illness or condition, or when the patient appeared to be dying.

The field of mental health in Montana between the years 1920 and 1940 seemed to regard the separation of cause, classification and symptomatology with some amount of confusion. Some things such as both primary symptoms and physiological etiological factors were treated as both precipitating factors and symptoms, these included worries, syphilis, and epilepsy, although the determination of when one was a precipitating factor and when a symptom was unclear. Other issues which might have been considered to be symptoms were not, such as senility, which was instead a precipitating factor and a diagnosis, while mental deterioration was the symptom commonly suffered by those patients.

Specific hypotheses were developed before this study began which were based upon studies that had been completed in other areas of the United States during this same time period. These hypotheses included: the expectation that the number of admissions would rise with time in all age brackets, but especially among those 55 and older, which would cause the average age of the patients to increase with time; and, the number of releases would become proportionately more numerous over time. Evaluation of these hypotheses shows that the state of Montana, its mental health field and practices, and its residents appear to be different from those in other regions of the US. The number of admissions did not rise across time. This may be due to the particular sample that had been selected, or could be a function of the conditions of the country at that time. The two years which showed the highest admissions to the hospital were 1929 and 1937. These

correspond to significant events occurring in the United States at that time, the Crash of 1929 and the recession in 1937. It could be postulated that admissions arose during those specific years due to an inability of individuals in the community to support themselves and needing the maintained environment provided by Montana State Hospital. This agrees with the ideas hypothesized by Brenner (1973) and Grob (1985) which stated that there was an increase in the total number of patients in mental hospitals due to many individuals' inability to care for themselves. This was especially prevalent in those 65 and older, as the almshouses closed and these people had nowhere else to go. The last few years explored, 1939 and 1940, showed a downward trend in admissions. This may be due to the number of jobs and opportunities that were provided by World War II. This trend would also agree with Brenner and Grob, in that as people were able to become more self-sufficient, the burden upon the state mental institution decreased.

The number of releases did not increase over time and the rate of deaths did not decrease over time, as had been predicted. This may be due to the primarily custodial care that was provided by the hospital, and the lack of prioritizing rehabilitation for the patients, which allowed for patients to remain in the hospital indefinitely. The number of deaths occurring during hospitalization may have been inflated due to patients' being sent to the hospital once they were unable to care for themselves or did not have family to rely upon when they were elderly and/or widowed. Thus, again the hospital was utilized for its custodial care of patients.

Several trends were predicted before the research began. Specific diagnoses were expected to become less prevalent over time. Both syphilis-related syndromes and manic-depressive disorder are examples. Also, schizophrenia or dementia praecox was expected

to be the most common disorder for those aged under 55 while senility was expected to be the most common for those over 55. A decrease in the presentation of syphilis was not seen for this sample of patients. This could be due in part to the possibility that penicillin was not made available to these patients and individuals not understanding health limitations and precautions in preventing the disease.

The fact that manic-depressive disorder does not decrease in prevalence over time, as was seen in other parts of the United States during the same time period (Malzberg, 1954), may be a function of a relatively small sample size, or that individuals in Montana were legitimately different than persons in other areas of the United States and so did not suffer from the same disorders. The fact that dementia praecox or schizophrenia was not the most common disorder for those under 55, as was expected due to previous research (Grob, 1985; Kramer et al., 1955; Malzberg, 1954), may also point to the fact that Montanans were different from other residents in the United States between 1920 and 1940. A further analysis of the data with a larger sample could be undertaken to determine this point more definitively.

Finding senility to be the most common diagnosis for those over the age of 55 is not be surprising in light of the custodial care performed by the hospital. It seems that many elderly individuals were sent to the hospital when they were unable to care for themselves due to a senility-related disorder or their family was unavailable. They then usually remained in Montana State Hospital until they died, which inflated the rates of death and presence of senility-related disorders in the sample population.

The Native American individuals in this sample were not analyzed separately due to the prohibitively small number for analysis. It can be wondered whether these

individuals were sent to Native American-specific institutions such as Canton, South Dakota, or were maintained and cared for at home in a more accepting and supportive environment. Thus, trends in care for Native Americans and comparison to the entire sample were not undertaken, and these issues not examined in this research.

It was found that the immigrants in this sample had a high degree of similarity to the native-born persons. This may be due in part to the inability to determine when the immigrants arrived in the United States and how long of an opportunity they had to assimilate into the culture; it has previously been found that immigrants found life during this time period and interacting with native-born individuals difficult, something that also appeared to be reflected in admission to state hospitals. Thus these immigrants were often admitted into a mental health institution within several years after arriving in the US (Mavreas & Bebbington, 1989). Immigrant women tended to be admitted several years later than males, however, apparently because they often did not interact as much with the outside community and so were able to function adequately longer than males (Westermeyer, 1989). It may also be that immigrants took longer to arrive in Montana in light of usually arriving on the east coast and needing time to migrate to the state of Montana. During this extended time they may again have had an opportunity to assimilate more fully into mainstream American culture.

Few differences were found between those individuals living in rural and urban areas in the state of Montana during the time period studied. This may be due to the fact that Montana as a whole was a very rural area and "urban" areas of the state may not have been significantly different than the rural regions. It is also not known when persons relocated to the larger cities if the urban areas were not their place of birth. It may be that

many individuals admitted to Montana State Hospital from urban areas had recently moved there from rural areas, and so it would follow that they would have more similarities to those in rural rather than urban areas.

Comparisons were made between the individuals represented within the sample of patient case records examined and the statistics that are available from the 1930 census (United States Department of Commerce, 1932) regarding the state of Montana. This particular year was chosen because the information was readily available for comparison, and it included the middle year that had been examined in this study. Notable differences were found between the persons admitted to the Montana State Hospital between 1920 and 1940 and the population of Montana as a whole in 1930. These variations may shed light on the specific reasons why people were admitted to the hospital or the "differences" from the general population which would lead to admission.

This study found that 74% of the patients at Montana State Hospital were male; the 1930 census information indicated that the state population was comprised of only 54.5% males. It appears that during this time period, being male contributed to the likelihood that an individual would be admitted to the Montana State Hospital. This is surprising in light of the fact that females tend to be over-represented in most in-patient populations and usually utilize mental health services more than males. In the study sample, it may be that males were placed in the hospital for other than psychiatric reasons, such as an alternative to the penal system or because they were unable to care for themselves if living alone. It may have been also that females at this particular time were cared for at home or were less noticed as deviant because they were not as involved in the community as males were.

The information available from the 1930 census indicated the percentage of each racial group in Montana to be 96.2% Caucasian, 2.8% Native American, .2% African American, and .8% "other." This is in comparison to the hospital population which was 90.6% Caucasian, 2.2% Native American, 1.7% African American, and 5.5% "other." Thus it can be seen that there was a slight over-representation of minority groups in the patient admissions to the hospital during this time period and that being a member of a minority group may have been characteristic of an individual who was considered "sick" or "different" enough from the general population and required admission to the hospital. Members of minority groups may not have been accepted by the dominant culture and may have experienced difficulty in coping with the majority group. Either of these reasons could have been influences on the minority individual's admission to the hospital. The ethnicity of the two groups were not compared due to the fact that of the hospital population 46.1% were not provided with an ethnic specification.

Marital status of the group within this study was determined to be 38.9% married, 37.2% single, 12.2% widowed, 8.3% divorced, 1.7% separated, and 1.7% "unknown." The individuals within the state of Montana as a whole in 1930 were classified as 22.3% married, 53.2% single, 4.4% widowed, and 1.3% divorced. Those individuals of separated or unknown status were not reported. This difference indicates that individuals who were married, widowed or divorced were more likely to be admitted to the hospital than those of other marital classifications. This may be due to the fact that a greater number of the sample were older individuals, who probable were more often married, widowed or divorced. And those who were widowed or divorced may not have been able to care for themselves and so were placed in the hospital facility.

Of the patients within the hospital sample over the age of 10 years, 82.8% were literate and 11.5% were illiterate. Literacy was not provided for 5.7% of the patients over age 10. The 1930 census indicated that Montana residents over the age of 10 years were 98.3% literate and only 1.7% illiterate. It appears then, that the Montana State Hospital sample was somewhat less literate than the general population. This finding corresponds to the idea that less educated and possibly more economically disadvantaged individuals were admitted to the state hospital because they could not care for themselves, and that more educated or economically affluent persons were able to utilize alternative resources such as private institutions or some form of home care (Brenner, 1973). Also, it may have been that individuals who were more educated or economically affluent exhibited the same behaviors as others who were admitted to the hospital, but because of the higher status in the community were considered to be "eccentric" rather than "different" or "sick" and so were maintained within society.

Specifics regarding area of residence and occupation were also compared between the study population and the state of Montana in general. It was found that 41.1% of the residents at Montana State Hospital during this time period lived in one of the six largest towns in Montana (Anaconda, Billings, Butte, Helena, Great Falls, and Missoula). Only 23.1% of the state's population in 1930 lived in these areas. Thus it appears that the Montana State Hospital population drew more predominantly from urban areas. As noted earlier, it is not known when individuals began their residency in one of the larger cities, and their admission to the hospital may have been a function of their inability to cope with "urban" life after being raised in a rural area. It may also have been that residents in urban

areas were less tolerant of deviant behaviors and utilized the state hospital to alleviate themselves of persons who were problematic or a public nuisance.

It was found that 68.0% of the hospital group aged ten and over had been employed prior to admission, while only 49.8% of the residents over age ten in Montana in 1930 were employed. This surprising disparity may even be minimized due to the disproportionate number of adults admitted to the hospital in comparison to children. The sample from the study were employed in positions as laborers (31.1%), agriculture (18.3%), housewives (16.7%), service providers (16.2%), professionals (1.8%), unemployed (16.7%), and "unknown" (.6%). The occupations of the general population of Montana were classified as 14.8% agriculture, 10.4% laborers, 10.0% service providers, 3.4% professionals, and 59.7% unemployed. For the purposes of the 1930 census, the classification of housewife was included within the category of unemployed. It can be seen with these comparisons that the state hospital sample were more likely to be laborers, service providers or in agriculture. This again tends to correspond with the theories that less educated or economically disadvantaged individuals tend to be admitted to hospitals, while those who are more educated or economically advantaged may utilize alternative resources (Brenner, 1973). Also, those in lower occupational levels may have been looked down upon and so were more likely to be placed in the hospital facility.

When the birth place of Caucasian individuals was examined in the study, it was found that 71.7% of the Caucasians were born within the United States and 28.3% were of foreign birth. The 1930 census revealed that 85.8% of the state's Caucasians were native-born, while only 14.1% were foreign-born. The census did not provide information regarding non-Caucasians and their place of birth. These comparisons indicate that

proportionately more of the Caucasian patients were of foreign birth. This finding corresponds with the ideas that migrants are at risk for various psychiatric disorders often due to the stressors of the relocation (Mavreas & Bebbington, 1989; Westermeyer, 1989). This finding may also indicate that between 1920 and 1940, immigrants were considered to be "different" from the general population, and as a result, these individuals were admitted to the Montana State Hospital rather than maintained or accepted in the community.

After consideration of the comparisons between the patients at Montana State Hospital between 1920 and 1940 and the population of Montana as a whole in 1930, a profile begins to emerge which espouses those personal characteristics related to admission to the hospital. Those individuals admitted to the hospital were different from the general population in several aspects. Patients were more often male; African American or "other" race; married, widowed, or divorced; illiterate; from one of the more "urban" areas of Anaconda, Billings, Butte, Great Falls, Helena, or Missoula; employed as a laborer, service provider, or in agriculture; and, if Caucasian, foreign-born. In considering the literacy and job status of the patients, it can be seen that it was more likely that they were less educated and potentially of lower economic status. These differences may indicate a number of characteristics which were related to being considered "different" enough or "sick" enough to be admitted to the Montana State Hospital between the years of 1920 and 1940. The community as a whole may not have accepted these individuals based upon one or more of these characteristics and utilized the state hospital as a means to rid society of the "different" or "sick" person. Also, a number of these characteristics in and of themselves may not have characterized a person as

"different," such as being male or married. But possibly in conjunction with other characteristics or in individuals considered problematic for other reasons, these arose in persons who were considered to be "different" or "sick" and in need of admission to Montana State Hospital.

In conclusion, information regarding the field of mental health and its practices in Montana between the years 1920 and 1940 was gathered by analyzing a sample of patient case records of individuals admitted to Montana State Hospital during that time period. Basic demographic breakdowns, specific admission information and differences between specific groups were determined. Comparisons were also made to the 1930 census to determine relations between personal characteristics and admission to the hospital. These patient case records are a rich source of information about this topic and this time period. This study exemplifies the benefits and gains that can be achieved by utilizing archival data sources and research methods in general, as well as providing the great amount of specific information about the state of Montana mental health trends between the years 1920 and 1940.

Appendix A - Coding Summary Sheet

SUMMARY INFORMATION SHEET

Patient Case Record Code Number: _____   coder's name: _____

Demographic Information

1. Birth Date: ___/___/___

2. Gender: _____

3. Race: _____
    if Native American, tribe: _____

4. Ethnicity: _____

5. Religion: _____

6. Marital Status: _____

7. Occupation: _____

8. Social Class: _____

9. Years of Education: _____
    Literate? _____

10. Primary Language: _____
    specific Native American language: _____

11. Place of Birth: _____
    Years Since Arrival in Montana: _____

12. Town of Residence: _____
    County of Residence: _____

13. Father's Occupation: _____
    Father's Place of Birth: _____

14. Mother's Occupation: _____
    Mother's Place of Birth: _____

Admission/Hospitalization Information

15. Age at Onset of Symptoms/Disorder: _____

16. Length of Stay

17. Admission Date: ___/___/___

18. Voluntary or Involuntary? _____

19. Physician/Psychiatrist Name: _____

20. Precipitating factors: _____

21. Predominant Psychopathological Symptom: _____

22. Secondary Psychopathological Symptom: _____

23. Primary Somatic Symptom/Condition: _____

24. Treatment Provided: _____

25. Outcome: _____

26. Date of Discharge/Parole: ___/___/___

Diagnosis/Classification

27. Primary Diagnosis: _____

28. Secondary Diagnosis: _____

COMMENTS:

SUBSEQUENT ADMISSIONS

Admission Date: ___/___/___
Voluntary or Involuntary? _____
Physician/Psychiatrist Name: _____
Precipitating Factors: _____
Predominant Psychopathological Symptom: _____
Secondary Psychopathological Symptom: _____
Primary Somatic Symptom/Condition: _____
Treatment Provided: _____
Outcome: _____
Date of Discharge/Parole: _____

Primary Diagnosis: _____
Secondary Diagnosis: _____

COMMENTS:

Appendix B - Codebook

Subject Number   (type as 5-digit number/box number   e.g., 12345/A1)

1. Date of Birth mm/dd/yyyy

2. Gender   1 = male
              2 = female

3. Race   1 = African American
              2 = Asian
              3 = Caucasian
              4 = Hispanic
              5 = Native American
              6 = Pacific Islander
              7 = other
              8 = Don't Know/Not Provided

4. Ethnicity

1 = African American	15 = Japanese
2 = Austrian	16 = Mexican
3 = British/English	17 = Native American - Cree
4 = Canadian	18 = Native American - Flathead
5 = Chinese	19 = Native American - Star
6 = Czechoslovakian	20 = Norwegian
7 = Danish	21 = Filipino
8 = Finnish	22 = Russian
9 = French	23 = Scandinavian
10 = German	24 = Spanish
11 = Hungarian	25 = Swedish
12 = Hungarian	26 = Swiss
13 = Italian	27 = Yugoslavian
14 = Irish	28 = Don't Know/None Provided

5. Religion

1 = Baptist	11 = Lutheran
2 = Brethren/Dunkard	12 = Methodist
3 = Buddhism	13 = Presbyterian
4 = Christian Scientist	14 = Protestant
5 = Congregational	15 = Quaker
6 = Episcopalian	16 = Roman Catholic
7 = Evangelical	17 = Unitarian
8 = German Reform Church	18 = None
9 = Jewish	19 = Don't Know/Not Provided
10 = Latter Day Saints/Mormon	

6. Marital Status   1 = Divorced   4 = Single
                                2 = Separated   5 = Widowed
                                3 = Married   6 = Don't Know/Not Provided

6a. Children?   1 = yes   2 = no   3 = Don't Know/Not Provided

7. Occupation

1 = attorney	26 = nurse
2 = auto body worker	27 = plumber
3 = barber	28 = porter
4 = bartender	29 = prospector
5 = bronco buster	30 = rail road worker
6 = butcher	31 = rancher
7 = cab driver	32 = road worker
8 = carpenter	33 = salesman
9 = cattleman	34 = sheepherder
10 = convict	35 = shoemaker
11 = chef/cook	36 = steam fitter
12 = farmer	37 = stone mason
13 = fireman	38 = store keeper
14 = furnace skimmer	39 = tailor
15 = gardener	40 = teacher
16 = harness maker	41 = telegrapher
17 = housekeeper	42 = tinner
18 = housewife	43 = tombstone cutter
19 = janitor	44 = none - infant
20 = jeweler	45 = none - retired
21 = laundry man	46 = none - student
22 = lumber worker	47 = none - unemployed
23 = machinist	48 = Don't Know/Not Provided
24 = miller	
25 = miner	49 = general laborer

8. Social Class   1 = indigent   2 = non-indigent   3 = Don't Know

9. Years of Education

     1 = none
     2 = some common school (less than 8 years)
     3 = graduated common school (8 years)
     4 = some high school (over 8 but less than 12 years)
     5 = graduated high school (12 years)
     6 = some technical school
     7 = graduated technical school
     8 = some college (over 12 but less than 16 years)
     9 = graduated college (16 years)
     10 = professional school/post-college (16+ years)
     11 = Don't Know/Not Provided

9a. Literacy   1 = yes (literate)   3 = Don't Know/Not Provided
                    2 = no (illiterate)

10. Primary Language

1 = Austrian	9 = Native American/French
2 = Chinese	10 = Native American
3 = Czechoslovakian	11 = Spanish
4 = English	12 = Swedish
5 = French	13 = Russian
6 = German	14 = none - infant
7 = Italian	16 = Yugoslavian
8 = Japanese	17 = Norwegian
	15 = Don't Know

11. Place of Birth

1 = Austria	11 = Japan
2 = Britain/England	12 = Macedonia
3 = Canada	13 = Norway
4 = Denmark	14 = Phillippines
5 = Finland	15 = Russia
6 = France	16 = Scotland
7 = Germany	17 = Spain
8 = Hungary	18 = Sweden
9 = Ireland	19 = Switzerland
10 = Italy	20 = Yugoslavia
21 = Alaska	36 = New York
22 = California	37 = North Dakota
23 = Colorado	38 = Ohio
24 = Illinois	39 = Oklahoma
25 = Indiana	40 = Pennsylvania
26 = Iowa	41 = South Dakota
27 = Kansas	42 = Tennessee
28 = Kentucky	43 = Texas
29 = Maine	44 = Utah
30 = Massachusetts	45 = Vermont
31 = Michigan	46 = Virginia
32 = Minnesota	47 = Washington
33 = Missouri	48 = Washington, D.C.
34 = Nebraska	49 = Wisconsin
35 = New Mexico	

50 = Anaconda
51 = Billings
52 = Browning
53 = Butte
54 = Hardin
55 = Helena
56 = Missoula

57 = Roundup
58 = Stevensville
59 = Stockett
60 = Unionville
61 = Custer County
62 = general Montana state
63 = Don't Know

11a. Years since Arrival in Montana ___

12. Town of Residence

1 = Anaconda
2 = Avon
3 = Beaverton
4 = Belt
5 = Big Timber
6 = Billings
7 = Bonner
8 = Boulder
9 = Bozeman
10 = Bridger
11 = Browning
12 = Butte
13 = Cascade
14 = Chinook
15 = Circle
16 = Columbia Falls
17 = Columbus
18 = Conrad
19 = Crow Agency
20 = Custer
21 = De Borgia
22 = Deer Lodge
23 = Dillon
24 = Drummond
25 = Ekalaka
26 = Freewater
27 = Geraldine
28 = Geyser
29 = Glendive
30 = Great Falls
31 = Harlem
32 = Helena
33 = Homestead
34 = Hot Springs
35 = Ingomar

36 = Kalispell
37 = Klein
38 = Lambert
39 = Lewistown
40 = Livingston
41 = Lyon
42 = Malta
43 = Miles City
44 = Milltown
45 = Missoula
46 = Moccasin
47 = Moore
48 = Old Chico Springs
49 = Ovando
50 = Plains
51 = Polson
52 = Pompeys Pillar
53 = Power
54 = Ronan
55 = Roundup
56 = Sand Coulee
57 = Scobey
58 = Sidney
59 = Stanford
60 = Stevensville
61 = Sunburst
62 = Thurlow
63 = Townsend
64 = Troy
65 = White Sulphur Springs
66 = Wibaux
67 = Winnett
68 = Out of State
69 = Transient
70 = Don't Know

12a. County of Residence

1 = Beaverhead	25 = Mineral
2 = Big Horn	26 = Missoula
3 = Blaine	27 = Mussleshell
4 = Broadwater	28 = Park
5 = Carbon	29 = Petroleum
6 = Carter	30 = Phillips
7 = Cascade	31 = Pondera
8 = Chouteau	32 = Powell
9 = Custer	33 = Ravalli
10 = Daniels	34 = Richland
11 = Dawson	35 = Rosebud
12 = Deer Lodge	36 = Sanders
13 = Fergus	37 = Sheridan
14 = Flathead	38 = Silver Bow
15 = Gallatin	39 = Stillwater
16 = Glacier	40 = Sweet Grass
17 = Granite	41 = Teton
18 = Jefferson	42 = Toole
19 = Judith Basin	43 = Valley
20 = Lake	44 = Wibaux
21 = Lewis and Clark	45 = Yellowstone
22 = Lincoln	46 = Don't Know/Not
23 = McCone	Provided
24 = Meagher	

13. Father's Occupation

1 = brewer	6 = newspaper editor
2 = carpenter	7 = sea captain
3 = farmer	8 = shoe repairman
4 = laborer	9 = stone cutter
5 = merchant	10 = Don't Know

14. Mother's Occupation

1 = housewife   2 = Don't Know/Not Provided

13a & 14a. Parent's Place of Birth

1 = Austria	12 = Italy
2 = Britain/England	13 = Japan
3 = Canada	14 = Macedonia
4 = China	15 = Norway
5 = Czechoslovakia	16 = Phillippines
6 = Denmark	17 = Russia
7 = Finland	18 = Spain
8 = France	19 = Sweden
9 = Germany	20 = Switzerland
10 = Hungary	21 = Yugoslavia
11 = Ireland	

22 = California	35 = Nebraska
23 = Colorado	36 = New Jersey
24 = Illinois	37 = New Mexico
25 = Indiana	38 = New York
26 = Iowa	39 = Ohio
27 = Kansas	40 = Pennsylvania
28 = Kentucky	41 = South Carolina
29 = Maine	42 = Tennessee
30 = Massachusetts	43 = Texas
31 = Michigan	44 = Vermont
32 = Minnesota	45 = Virginia
33 = Mississippi	46 = West Virginia
34 = Missouri	47 = Wisconsin
48 = Bozeman	50 = general Montana
49 = Stevensville	51 = Don't Know/Not

15. Age at Onset of Symptoms/Disorder   _____

16. Length of Stay   (you do not need to enter)

17. Admission Date: mm/dd/yy

18. Type of Admission   1 = voluntary
                            2 = involuntary
                            3 = not committed - medical referral only

19. Physician/Psychiatrist Name

1 = B	10 = A
2 = J	11 = F
3 = N	12 = R
4 = O	13 = Q
5 = C	14 = H
6 = D	15 = L
7 = K	16 = I
8 = P	17 = G
9 = E	19 = M
	18 = Don't Know/Not Provided

20. Precipitating Factors 1 = syphilis/lues
             2 = worries (e.g., financial, domestic, romantic)
             3 = head/spinal injury
             4 = female - childbirth, menopause
             5 = drug addiction
             6 = alcoholism
             7 = senility/presenility
             8 = imbecility/idiocy/mongoloidism
             9 = stroke/paralysis
             10 = epilepsy
             11 = flu
             12 = electric shock
             13 = arteriosclerosis
             14 = apoplexy
             15 = carbon monoxide poisoning
             16 = alcohol poisoning
             18 = medical referral
             19 = attmepted rape
             17 = Don't Know/Not Provided

21, 22 & 22a. Psychopathological Symptoms
      1 = delusions - grandeur
      2 = delusions - senile
      3 = delusions - persecution
      4 = delusions - religion
      5 = delusions - not otherwise specified
      6 = hallucinations - auditory
      7 = hallucinations - visual
      8 = hallucinations - not otherwise specified
      9 = mental deterioration/decline in memory/decline in
      10 = mental retardation/idiocy
      11 = depression/melancholia
      12 = suicidality/self-destruction
      13 = paranoia/suspiciousness
      14 = mania/delirium
      15 = obsessions
      16 = violence
      17 = psychomotor agitation
      18 = None (if NO symptoms)
      19 = Don't Know/Not Provided (use if no ADDITIONAL
        symptoms

23. Somatic Symptom/Condition
    1 = syphilis   7 = hypochondriasis
    2 = gonorrhea   8 = headaches
    3 = paralysis/crippled   9 = head trauma
    4 = epilepsy/convulsions/seizures   10 = substance abuse
    5 = blindness   11 = None Provided
    6 = deafness

24. Treatment Provided   1 = none
    ** use 2 = general   2 = general
       when no treat-   3 = alternating treatment
       ment provided   4 = examination and consideration or surgical
                                   5 = restraints
                                   6 = spinal test

24a. Medication Provided   1 = atropine
                                   2 = barbital
                                   3 = cascara/cas evac
                                   4 = digilin/digitalis
                                   5 = ipral
                                   6 = luminal
                                   7 = magnesium sulphate
                                   8 = mercury
                                   9 = morphine
                                   10 = salversan
                                   11 = tryparsamide
                                   12 = none/no others provided

24b, c, d. Additional Medication Provided

25. Outcome 1 = death
             2 = parole
             3 = escape
             4 = discharge (without parole)
             5 = deported to STATE of residency
             6 = deported to COUNTRY of nativity
             7 = transfer to another hospital or institution
             8 = returned to prison

26. Date of Parole/Escape/Deportation/Transfer/Death: mm/dd/yy

26a. Date of Discharge: mm/dd/yy

26b. Cause of death

      1 = exhaustion of paresis/paresis/general paralysis of the insane
      2 = syphilis/cerebrospinal syphilis
      3 = general arteriosclerosis/arteriosclerosis with hypertension
      4 = arteriosclerosis with psychosis
      5 = arteriosclerosis with mental deterioration
      6 = arteriosclerotic gangrene
      7 = hardened arteries
      8 = chronic myocarditis/myocardial degeneration
      9 = acute endocarditis - mitral insufficiency
    10 = chronic endocarditis - mitral insufficiency
    11 = coronary occlusion
    12 = chronic biliary obstruction
    13 = acute parenchymatous nephritis
    14 = chronic (tubular) nephritis/parenchymatons
    15 = cardiovascular renal disease
    16 = obstructive jaundice
    17 = acute parenchymatons
    18 = facial erysipelas
    19 = exhaustion of chorea
    20 = general salftemia
    21 = acute salftemia
    22 = pneumonia/bronchopneumonia/lobar pneumonia
    23 = pulmonary tuberculosis/acute pulmonary tuberculosis
    24 = tibroid phthisis
    25 = chronic passive congestion
    26 = suicide
    27 = carcinoma
    28 = influenza
    29 = cerebral hemorrhage/apoplexy
    30 = senile deterioration/exhaustion of senile psychosis/dementia
    31 = alcoholism/chronic alcoholism
    32 = status epilepticus/epilepsy
    33 = exhaustion of manic depressive psychosis/manic depressive
    34 = exhaustion from acute mania
    35 = mental deficiency/insufficiency
    36 = Don't Know/Not Provided
    37 = None - Did not die
    38 = trauma to body - burns, broken arm, etc.
    39 = general mental and physical inertia

** be sure to mark 37 = none/did not die when appropriate!

27. Primary Diagnosis   1 = medical exam - no psychological diagnosis

2 = none/deferred - not insane

3 = "no psychosis demonstrated"/#23 without psychosis

4 = psychosis - traumatic, postoperative, toxic

5 = psychosis with cerebral hemorrhage

6 = psychosis - #08 with arteriosclerosis/#08
           arteriosclerosis with mental deterioration

7 = psychosis - #15 with organic changes of nervous
           system/#15 organic disease with psychosis

8 = psychosis - undifferentiated

9 = syphilis - #01 psychosis with meningoencephalitis/#01

10 = general paresis/paralysis of the insane

11 = cerebrospinal syphilis with psychosis

12 = cerebrospinal lues with mental deterioration/#02

13 = psychosis with meningosyphilitic encephalitis

14 = paresis/early paresis/incipient paresis

15 = #11 senile psychosis/senility

16 = senility with arteriosclerosis

17 = senility with mental/simple deterioration (#111)

18 = senility with psychosis

19 = senile dementia with paranoid and delusional trend

20 = senile dementia

21 = senile dementia, confused and agitated state

22 = alcoholism with no psychosis/#232 alcoholism

23 = alcoholism (chronic) with psychosis

24 = no diagnosis but alcohol related

25 = (cerebral) arteriosclerosis with psychosis

26 = arteriosclerosis with (mental) deterioration

27 = arteriosclerosis with acute mania

28 = drug addiction/morphinism

29 = drug addiction/morphinism without psychosis

30 = involution melancholia/menopause

31 = epilepsy with mental deterioration

32 = epilepsy with psychosis

33 = dementia praecox - simple

34 = dementia praecox - paranoid

35 = dementia praecox - catatonic

36 = dementia praecox - hebephrenic

37 = dementia praecox - not otherwise specified

38 = schizophrenia - paranoid

39 = schizophrenia - hebephrenic

40 = schizophrenia - not otherwise specified

41 = (#17) manic depressive - depressed phase (#172)

42 = (#17) manic depressive - manic phase

43 = (#17) manic depressive - depressed and

44 = (#17) manic depressive - not otherwise specified
45 = #16 psychoneurosis
46 = psychopathic personality without psychosis
47 = acute mania
48 = paranoid condition
49 = hysteria
50 = imbecility/(#234) mental deficiency/idiocy

28. Secondary Diagnosis

1 = no psychosis
2 = psychosis
3 = grand mal seizures
4 = #163 neurasthenia
5 = arthritis deformans
6 = syphilis related (lues. puerperal cause, paralysis agitens
7 = psychoneurosis - psychasthenic type
8 = None

28a. Revised Primary Diagnosis (selections same as primary diagnosis above)

28b. Revised Secondary Diagnosis (selections same as secondary diagnosis above)

28c. Date of Revised Diagnosis: mm/dd/yy

Subsequent Diagnoses
        ** start with admission date (#17) above and use same category selections

Appendix C - Classifications for
Additional Variables

REGION OF ETHNICITY:

Western European
- Austrian
- British/English
- French
- German
- Italian
- Irish
- Spanish
- Swiss

Northern European
- Danish
- Finnish
- Norwegian
- Scandinavian
- Swedish

African American

Unknown (not provided)

Eastern European
- Czechoslovakian
- Hungarian
- Russian
- Yugoslavian

Asian/Pacific Islander
- Chinese
- Filipino
- Japanese

North/Central American
- Canadian
- Mexican
- Native American
    - Cree, Flathead, Star

PRIMARY LANGUAGE:

Western European
- Austrian
- French
- German
- Italian
- Spanish
- Swedish
- Norwegian

Native American
- French dialect
- other dialect

Unknown (not provided)

Eastern European
- Czechoslovakian
- Russian
- Yugoslavian

Asian
- Chinese
- Japanese

English

None - infant

OCCUPATION:

Laborer

autobody worker
bronco buster
carpenter
furnace skimmer
gardener
harness maker
lumber worker
machinist
miller
miner
prospector
railroad worker
road worker
steam fitter
stone mason
tinner
tombstone cutter
general laborer

Service

barber
bartender
butcher
cab driver
        chef/cook
fireman
housekeeper
janitor
jeweler
laundry man
plumber
porter
salesman
shoemaker
storekeeper
tailor
telegrapher
watchman

Professional

attorney
nurse
teacher

Agriculture

cattleman
farmer
rancher
sheepherder

No Employment

convict
infant
retiree
student
unemployed

Housewife

Unknown (not provided)

OUT OF COUNTRY PLACE OF BIRTH:

Western European

Austria
Britain/England
France
Germany
Ireland
Italy
Scotland
Spain
Switzerland

Northern European

Denmark
Finland
Norway
Sweden

Eastern European

Hungary
Macedonia
Russia
Yugoslavia

Asian/Pacific Islander

Japan
Phillippines

Other

Canada

US STATE (NON-MONTANA) PLACE OF BIRTH:

East Coast
Maine
Massachusetts
New York
Vermont
Washington, D.C.

Southern States
Tennessee
Virginia

Plains States
Iowa
Kansas
Nebraska
North Dakota
Oklahoma
South Dakota

Other
Alaska

Midwest
Illinois
Indiana
Kentucky
Michigan
Minnesota
Missouri
Ohio
Pennsylvania
Wisconsin

Northwest/Mountain States
Colorado
Utah
Washington

West Coast/Southwest States
California
New Mexico
Texas

WITHIN THE STATE OF MONTANA PLACE OF BIRTH:

Western Montana
Anaconda
Butte
Helena
Missoula
Stevensville
Stockett
Unionville

Eastern Montana
Billings
Browning
Hardin
Roundup
Custer County

General State of Montana

COUNTY OF RESIDENCE BY REGION:

Western
Flathead
Lake
Lincoln
Mineral
Missoula
Ravalli
Sanders

South Central
Big Horn
Carbon
Fergus
Musselshell
Petroleum
Stillwater
Sweet Grass
Yellowstone

Eastern
Carter
Custer
Daniels
Dawson
McCone
Phillips
Richland
Rosebud
Sheridan
Valley
Wibaux

COUNTY OF RESIDENCE BY REGION (CON'D)

North Central
- Blaine
- Cascade
- Choteau
- Glacier
- Judith Basin
- Pondera
- Teton
- Toole

Southwestern
- Beaverhead
- Broadwater
- Deer Lodge
- Gallatin
- Granite
- Jefferson
- Lewis & Clark
- Meagher
- Park
- Powell
- Silver Bow

PARENT'S OUT OF COUNTRY PLACE OF BIRTH:

Western European
- Austria
- Britain/England
- France
- Germany
- Ireland
- Italy
- Spain
- Switzerland

Asia/Pacific Islander
- China
- Japan
- Phillippines

Northern European
- Denmark
- Finland
- Norway
- Sweden

Eastern European
- Czechoslovakia
- Hungary
- Macedonia
- Russia
- Yugoslavia

Other
- Canada

PARENT'S US STATE (NON-MONTANA) PLACE OF BIRTH:

Midwest
- Illinois
- Indiana
- Kentucky
- Michigan
- Minnesota
- Missouri
- Ohio
- Pennsylvania
- Wisconsin

Plains States
- Iowa
- Kansas
- Nebraska

Mountain States
- Colorado

East Coast
- Maine
- Massachusetts
- New Jersey
- New York
- Vermont

Southern States
- Mississippi
- South Carolina
- Tennessee
- Virginia
- West Virginia

West/Southwest States
- California
- New Mexico
- Texas

PSYCHOPATHOLOGICAL SYMPTOMS:

Delusions
- grandeur
- persecution
- religion
- senile
- not otherwise specified

Hallucinations
- auditory
- visual
- not otherwise specified

None

Mental Deterioration

Mental Retardation

Depression

Suicidality/Violence

Paranoia/Obsessions

Mania/Agitation

Unknown (not provided)

CAUSE OF DEATH:

Syphilis-Related
- cerebrospinal syphilis
- exhaustion of paresis
- general paralysis of the insane
- paresis
- syphilis

Kidney Disease-Related
- acute parenchymatous nephritis
- cardiovascular renal disease
- chronic (tubular) nephritis

Lung Disease-Related
- acute pulmonary tuberculosis
- bronchopneumonia
- chronic passive congestion
- lobar pneumonia
- pneumonia
- pulmonary tuberculosis
- tibroid phthisis

(Chronic) Alcoholism

Disease of the Aged
- senile deterioration
- exhaustion of senile psychosis
- dementia

Trauma to Body
- burns
- broken bones

Mental Deficiency/Insufficiency

Did Not Die

Unknown (not provided)

Heart Disease-Related
- acute endocarditis - mitral insufficiency
- arteriosclerosis with hypertension
- arteriosclerosis with mental deterioration
- arteriosclerosis with psychosis
- arteriosclerotic gangrene
- chronic biliary obstruction
- chronic endocarditis - mitral insufficiency
- chronic myocarditis
- coronary occlusion
- general arteriosclerosis
- hardened arteries
- myocardial degeneration

Cerebral Hemorrhage/Apoplexy

Epilepsy-Related
- epilepsy
- status epilepticus

Other General Medical Condition
- acute parenchymatons
- carcinoma
- chronic salfmigitis
- exhaustion of chorea
- facial erysipelas
- general salftemia
- influenza
- obstructive jaundice

Suicide

Psychological Functioning-Related
- exhaustion from acute mania
- exhaustion of manic depressive psychosis
- manic depressive psychosis

CLASSIFICATION OF PRIMARY DIAGNOSIS:

Various Psychoses

organic disease with psychosis
postoperative, toxic, traumatic
psychosis with arteriosclerosis
psychosis with cerebral hemorrhage
psychosis with arteriosclerosis and mental deterioration
psychosis with organic changes of the nervous system
undifferentiated

Dementia Praecox and Schizophrenia

dementia praecox - catatonic
dementia praecox - hebephrenic
dementia praecox - paranoid
dementia praecox - simple
dementia praecox - not otherwise specified
schizophrenia - hebephrenic
schizophrenia - paranoid
schizophrenia - not otherwise specified

Manic Depressive

depressed phase
depressed and manic/circular/mixed phase
manic phase
not otherwise specified

Mania and Hysteria

acute mania
hysteria

Other Psychological Diagnoses

involution melancholia
menopause
paranoid condition
psychoneuroses
psychopathic personality without psychosis

Related to Aged/Senility

senile dementia/senility
senile dementia, confused and agitated state
senile dementia with paranoid and delusional trend
senile psychosis
senility with arteriosclerosis
senility with mental deterioration
senility with psychosis

Substance Abuse

alcoholism with no psychosis
(chronic) alcoholism with psychosis
drug addiction
drug addiction without psychosis
morphinism
morphinism without psychosis
no diagnosis but alcohol related

Syphilis-Related
> cerebrospinal lues with mental deterioration
> cerebrospinal syphilis with psychosis
> cerebrosyphilis with mental deterioration
> early paresis
> general paralysis of the insane
> general paresis of the insane
> incipient paresis
> paresis
> psychosis with menigoencephalitis
> psychosis with menigosyphilitic encephalitis
> psychosis with syphilitic menigoencephalitis

Heart Disease-Related
> arteriosclerosis with acute mania
> arteriosclerosis with deterioration
> arteriosclerosis with psychosis
> cerebral arteriosclerosis with psychosis

Epilepsy-Related
> epilepsy with mental deterioration
> epilepsy with psychosis

Mental Deficiency
> idiocy
> imbecility
> mentally deficient

Medical Exam - No Diagnosis

Deferred or No Psychosis
> deferred - not insane
> no psychosis demonstrated
> without psychosis

Unknown (not provided)

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Table 1
Region of Ethnicity: Frequency and Percent

Ethnicity	Frequency	Percent		Ethnicity	Frequency	Percent
Austrian	2	1.1		Czechoslovakian	2	1.1
British	7	3.9		Hungarian	1	.6
French	2	1.1		Russian	2	1.1
German	17	9.4		Yugoslavian	2	1.1
Italian	3	1.7		**Eastern European**	**7**	**3.9**
Irish	23	12.8				
Spanish	1	.6		Chinese	1	.6
Swiss	2	1.1		Filipino	1	.6
Western European	**57**	**31.7**		Japanese	1	.6
				Asian/Pacific Islander	**3**	**1.8**
Danish	2	1.1				
Finnish	1	.6		Canadian	3	1.7
Norwegian	6	3.3		Mexican	2	1.1
Scandinavian	1	.6		Native American	3	1.8
Swedish	9	5.0		**North/Central American**	**8**	**4.6**
Northern European	**7**	**10.6**				
				Unknown (not provided)	**83**	**46.1**
African American	**3**	**1.7**				

Note. Entries for categories in bold type summarize over the categories above them. Percentages do not precisely add up to 100% due to rounding error.

Table 2
Primary Language: Frequency and Percent

Language	Freq	Percent		Language	Freq	Percent
English	**153**	**85**		Czechoslavakian	1	.6
				Russian	1	.6
Austrian	1	.6		Yugoslavian	1	.6
French	1	.6		**Eastern European**	**3**	**1.8**
German	2	1.1				
Italian	3	1.7		Chinese	1	.6
Spanish	2	1.1		Japanese	1	.6
Swedish	2	1.1		**Asian**	**2**	**1.2**
Norwegian	1	.6				
Western and Northern European	**12**	**6.8**		**None - Infant**	**3**	**1.8**
Native American Dialect	**2**	**1.1**		**Unknown**	**5**	**3.0**

Note. Entries for categories in bold type summarize over the categories above them. Percentages do not precisely sum to 100% due to rounding error.

Table 3
Religious Affiliation: Frequency and Percent

Religion	Frequency	Percent		Religion	Frequency	Percent
Baptist	5	2.8		Lutheran	15	8.3
Brethern/Dunkard	2	1.1		Methodist	9	5.0
Buddhism	2	1.1		Presbyterian	5	2.8
Christian Science	4	2.2		Protestant	21	11.7
Congregational	1	.6		Quaker	1	.6
Episcopalian	2	1.1		Roman Catholic	51	28.3
Evangelical	2	1.1		Unitarian	1	.6
German Reform	1	.6		None	11	6.1
Judiasm	1	.6		Unknown	43	23.9
Latter Day Saints/Mormon	3	1.7				

Note. Percentages do not preceisely sum to 100% due to rounding error.

Table 4
Marital Status: Frequency and Percent

Marital Status	Frequency	Percent		Marital Status	Frequency	Percent
Married	70	38.9		Divorced	15	8.3
Single	67	37.2		Separated	3	1.7
Widowed	22	12.2		Unknown	3	1.7

Table 5
Highest Level of Education Achieved: Frequency and Percent

Education	Freq	Percent		Education	Freq	Percent
None	18	10.0		Some Technical School	2	1.1
Some Common School (less than 8 years)	60	33.3		Some college (less than sixteen years)	5	2.8
Graduated Common School (eight years)	30	16.7		Graduated College (sixteen years)	2	1.1
Some High School (less than twelve years)	10	5.6		Unknown	45	25.0
Graduated High School (twelve years)	8	4.4				

Table 6
Town of Residence; Frequency and Percent

Town	Frequency	Percent	Town	Frequency	Percent
Anaconda	7	3.9	Kalispell	1	.6
Avon	1	.6	Klein	1	.6
Beaverton	1	.6	Lambert	1	.6
Belt	1	.6	Lewistown	6	3.3
Big Timber	2	1.1	Livingston	3	1.7
Billings	7	3.9	Lyon	1	.6
Bonner	1	.6	Malta	3	1.7
Boulder	1	.6	Miles City	3	1.7
Bozeman	3	1.7	Milltown	1	.6
Bridger	1	.6	Missoula	8	4.4
Browning	3	1.7	Moccasin	1	.6
Butte	26	14.4	Moore	1	.6
Cascade	1	.6	Old Chico Springs	1	.6
Chinook	2	1.1	Ovando	1	.6
Circle	1	.6	Plains	1	.6
Columbia Falls	1	.6	Polson	2	1.1
Columbus	1	.6	Pompeys Pillar	1	.6
Conrad	1	.6	Power	1	.6
Crow Agency	1	.6	Ronan	1	.6
Custer	1	.6	Roundup	2	1.1
De Borgia	1	.6	Sand Coulee	1	.6
Deer Lodge	8	4.4	Scobey	1	.6
Dillon	3	1.7	Sidney	2	1.1
Drummond	1	.6	Stanford	1	.6
Ekalaka	1	.6	Stevensville	1	.6
Freewater	1	.6	Sunburst	1	.6
Geraldine	2	1.1	Thurlow	1	.6
Geyser	1	.6	Townsend	1	.6
Glendive	3	1.7	Troy	1	.6
Great Falls	10	5.6	White Sulphur Springs	2	1.1
Harlem	1	.6	Wibaux	1	.6
Helena	16	8.9	Winnett	2	1.1
Homestead	1	.6	Out of State	2	1.1
Hot Springs	1	.6	Transient	2	1.1
Ingomar	1	.6	Unknown	7	3.9

Table 7
County of Residence, By Region; Frequency and Percent

County	Frequency	Percent		County	Frequency	Percent
Flathead	2	1.1		Carter	1	.6
Lake	3	1.7		Custer	3	1.7
Lincoln	1	.6		Daniels	1	.6
Mineral	1	.6		Dawson	3	1.7
Missoula	12	6.7		McCone	1	.6
Ravali	1	.6		Phillips	5	2.8
Sanders	2	1.1		Richland	3	1.7
Western Region	**22**	**12.4**		Rosebud	2	1.1
				Sheridan	1	.6
Big Horn	1	.6		Valley	1	.6
Carbon	1	.6		Wibaux	1	.6
Fergus	7	3.9		**Eastern Region**	**22**	**12.6**
Musselshell	3	1.7				
Petroleum	2	1.1		Beaverhead	3	1.7
Stillwater	1	.6		Broadwater	1	.6
Sweet Grass	2	1.1		Deer Lodge	7	3.9
Yellowstone	9	5.0		Gallatin	3	1.7
South Central Region	**26**	**14.6**		Granite	1	.6
				Jefferson	1	.6
Blaine	3	1.7		Lewis & Clark	16	8.9
Cascade	13	7.2		Meagher	2	1.1
Choteau	2	1.1		Park	5	2.8
Glacier	3	1.7		Powell	10	5.6
Judith Basin	3	1.7		Silver Bow	28	15.6
Pondera	2	1.1		**Southwestern Region**	**77**	**43.1**
Teton	1	.6				
Toole	1	.6				
North Central Region	**28**	**15.7**				

Note. Entries for categories in bold type summarize over categories above them. Percentages do not precisely sum to 100% due to rounding error.

Table 8

Occupational Category; Frequency and Percent

Occupation	Frequency	Percent		Occupation	Frequency	Percent
autobody worker	1	.6		barber	1	.6
bronco buster	1	.6		bartender	1	.6
carpenter	1	.6		butcher	1	.6
furnace skimmer	2	1.1		cab driver	1	.6
gardener	1	.6		chef/cook	6	3.3
harness maker	1	.6		fireman	1	.6
lumber worker	1	.6		housekeeper	2	1.1
machinist	2	1.1		janitor	1	.6
miller	1	.6		jeweler	1	.6
miner	11	6.1		laundry man	1	.6
railroad worker	7	3.9		plumber	1	.6
road worker	1	.6		porter	1	.6
steam fitter	1	.6		salesman	3	1.7
stone mason	1	.6		shoemaker	1	.6
tinner	1	.6		storekeeper	3	1.7
tombstone cutter	1	.6		tailor	1	.6
general laborer	21	11.7		telegrapher	1	.6
Laborer	**55**	**31.1**		watchman	1	.6
				Service	**28**	**16.2**
cattleman	1	.6				
farmer	24	13.3		convict	4	2.2
rancher	4	2.2		infant	4	2.2
sheepherder	4	2.2		retiree	9	5.0
Agriculture	**33**	**18.3**		student	3	1.7
				unemployed	10	5.6
attorney	1	.6		**No Employment**	**30**	**16.7**
nurse	1	.6				
teacher	1	.6		**Housewife**	**30**	**16.7**
Professional	**3**	**1.8**				
				Unknown	**1**	**.6**

Note. Entries of categories in bold type summarize those categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 9
Place of Birth, by Location; Frequency and Percent

Location	Freq	Percent		Location	Freq	Percent
Austria	1	.6		Maine	1	.6
Britain	3	1.7		Massachusetts	4	2.2
France	1	.6		New York	7	3.9
Germany	5	2.8		Vermont	1	.6
Ireland	4	2.2		Washington. D.C.	1	.6
Italy	3	1.7		**East Coast**	14	7.9
Scotland	1	.6		Tennessee	1	.6
Spain	1	.6		Virginia	2	1.1
Switzerland	2	1.1		**Southern States**	3	1.7
Western Europe	21	11.9		Illinois	8	4.4
Denmark	2	1.1		Indiana	4	2.2
Finland	1	.6		Kentucky	1	.6
Norway	4	2.2		Michigan	9	5.0
Sweden	7	3.9		Minnesota	7	3.9
Northern Europe	14	7.8		Missouri	5	2.8
Hungary	1	.6		Ohio	5	2.8
Macedonia	1	.6		Pennsylvania	3	1.7
Russia	3	1.7		Wisconsin	12	6.7
Yugoslavia	2	1.1		**Midwest**	54	30.1
Eastern Europe	7	4.0		Iowa	9	5.0
Japan	1	.6		Kansas	5	2.8
Phillipibes	1	.6		Nebraska	2	1.1
Asia/Pacific Islands	2	1.2		North Dakota	2	1.1
Canada	4	2.2		Oklahoma	1	.6
FOREIGN BORN	48	27.1		South Dakota	1	.6
				Plains States	20	11.2
Anaconda	2	1.1		Colorado	3	1.7
Butte	4	2.2		Utah	2	1.1
Helena	4	2.2		Washington	1	.6
Missoula	1	.6		**Northwest/Mountain States**	6	3.4
Stevensville	1	.6		California	3	1.7
Stockett	1	.6		New Mexico	2	1.1
Unionville	1	.6		Texas	1	.6
Western Montana	14	7.9		**West Coast/Southwest States**	6	3.4
Billings	2	1.1		**Alaska**	1	.6
Browning	1	.6		**NON-MONTANA NATIVE BORN**	104	58.3
Hardin	1	.6				
Roundup	1	.6				
Custer County	1	.6				
Eastern Montana	6	3.5				
General Montana State	4	2.2				
MONTANA NATIVE	24	13.6				

Note. Entries of categories in bold type summarize those categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 10
Categories of Race by Gender; Frequency and Percent

Category of Race	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)	Females (Freq)	Females (Percent of Total)	Females (percent of Females)
African American	3	1.7	2.3	0	0	0
Asian	2	1.1	1.5	0	0	0
Caucasian	119	66.1	89.5	44	24.4	93.6
Hispanic	2	1.1	1.5	0	0	0
Native American	2	1.1	1.5	2	1.1	4.3
Pacific Islander	1	.6	.8	0	0	0
Unknown	4	2.2	2.9	1	.6	2.1
TOTAL	**133**	**73.9**	**100**	**47**	**26.1**	**100**

Table 11
Region of Ethnicity by Gender: Frequency and Percent

Ethnicity	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)		Females (Freq)	Females (Percent of Total)	Females (Percent of Females)
Austrian	1	.6	.8		1	.6	2.1
British	4	2.2	3.0		3	1.7	6.4
French	0	0	0		2	1.1	4.3
German	12	6.7	9.0		5	2.8	10.6
Italian	3	1.7	2.3		0	0	0
Irish	20	11.1	15.0		3	1.7	6.4
Spanish	1	.6	.8		0	0	0
Swiss	0	0	0		2	1.1	4.3
Western European	**41**	**22.9**	**30.9**		**16**	**9.0**	**34.1**
Danish	2	1.1	1.5		0	0	0
Finnish	0	0	0		1	.6	2.1
Norwegian	5	2.8	3.8		1	.6	2.1
Scandinavian	1	.6	.8		0	0	0
Swedish	6	3.3	4.5		3	1.7	6.4
Northern European	**14**	**7.8**	**10.6**		**5**	**2.9**	**10.6**
Czechoslavakian	1	.6	.8		1	6	2.1
Hungarian	0	0	0		1	6	2.1
Russian	1	.6	.8		1	.6	2.1
Yugoslavian	1	.6	.8		1	.6	2.1
Eastern European	**3**	**1.8**	**2.4**		**4**	**2.4**	**8.4**
Chinese	1	.6	.8		0	0	0
Filipino	1	.6	.8		0	0	0
Japanese	1	.6	.8		0	0	0
Asian/Pacific Islander	**3**	**1.8**	**2.4**		**0**	**0**	**0**
Canadian	3	1.7	2.3		0	0	0
Mexican	2	1.1	1.5		0	0	0
Native American	2	1.1	1.5		1	.6	2.1
North/Central American	**7**	**3.9**	**5.3**		**1**	**.6**	**2.1**
African American	**3**	**1.7**	**2.3**		**0**	**0**	**0**
Unknown	**62**	**34.4**	**46.6**		**21**	**11.7**	**44.7**

Note. Those entries of categories in bold type sumarize those categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 12
Religious Affiliation by Gender: Frequency and Percent

Religion	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)		Females (Freq)	Females (Percent of Total)	Females (Percent of Females)
Baptist	4	2.2	3.0		1	.6	2.1
Brethern/Dunkard	1	.6	.8		1	.6	2.1
Buddhism	2	1.1	1.5		0	0	0
Christian Science	2	1.1	1.5		2	1.1	4.3
Congregational	1	.6	.8		0	0	0
Episcopalian	1	.6	.8		1	.6	2.1
Evangelical	1	.6	.8		1	.6	2.1
German Reform Church	0	0	0		1	.6	2.1
Judiasm	1	.6	.8		0	0	0
Latter Day Saints/Mormom	2	1.1	1.5		1	.6	2.1
Lutheran	12	6.7	9.0		3	1.7	6.4
Methodist	6	3.3	4.5		3	1.7	6.4
Presbyterian	4	2.2	3.0		1	.6	2.1
Protestant	14	7.8	10.5		7	3.9	14.9
Quaker	0	0	0		1	.6	2.1
Roman Catholic	40	22.2	30.1		11	6.1	23.4
Unitarian	1	.6	.8		0	0	0
None	10	5.6	7.5		1	.6	2.1
Unknown	31	17.2	23.3		12	6.7	25.5

Note. Entries of categories in bold summarize those categories above them. Percentages do not sum precisely 100% due to rounding error.

Table 13
Marital Status by Gender: Frequency and Percent

Marital Status	Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)		Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
Married	45	25.0	33.8		25	13.9	53.2
Single	59	32.8	44.4		8	4.4	17.0
Widowed	12	6.7	9.0		10	5.6	21.3
Divorced	14	7.8	10.5		1	.6	2.1
Separated	2	1.1	1.5		1	6	2.1
Unknown	1	.6	.8		2	1.1	4.3

Note. Entries of categories in bold summarize those categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 14

Occupation by Gender: Frequency and Percent

Occupation	Freq (Males)	Percent of Total	Percent of Males		Occupation	Freq (Males)	Percent of Total	Percent of Males
auto body worker	1	.6	.8		barber	1	6	8
bronco buster	1	.6	.8		bartender	1	6	8
carpenter	1	.6	.8		butcher	1	6	8
furnace skimmer	2	1.1	1.5		cab driver	1	6	8
gardener	1	.6	.8		chef/cook	6	3.3	4.5
harness maker	1	.6	.8		fireman	1	6	8
lumber worker	1	.6	.8		janitor	1	6	8
machinist	2	1.1	1.5		jeweler	1	.6	8
miller	1	.6	.8		laundry man	1	6	.8
miner	11	6.1	8.3		plumber	1	.6	.8
railroad worker	7	3.9	5.3		porter	1	.6	.8
road worker	1	.6	.8		salesman	3	1.7	2.3
steam fitter	1	.6	.8		shoemaker	1	.6	.8
stone mason	1	.6	.8		storekeeper	2	1.1	1.5
tinner	1	.6	.8		tailor	1	.6	.8
tombstone cutter	1	.6	.8		telegrapher	1	.6	.8
general laborer	21	11.7	15.8		watchman	1	.6	.8
Laborer	**55**	**31.1**	**42.0**		**Service**	**24**	**13.9**	**18.7**
attorney	1	.6	.8		convict	4	2.2	3.0
Professional	**1**	**.6**	**.8**		infant	3	1.7	2.3
					retiree	5	2.8	3.8
cattleman	1	.6	.8		student	3	1.7	2.3
farmer	24	13.3	18.0		unemployed	4	2.2	3.0
rancher	4	2.2	3.0		**None**	**19**	**10.6**	**14.4**
sheepherder	4	2.2	3.0					
Agriculture	**33**	**18.3**	**24.8**		**Unknown**	**0**	**0**	**0**

Occupation	Freq (Females)	Percent of Total	Percent of Females		Occupation	Freq (Females)	Percent of Total	Percent of Females
housekeeper	2	1.1	4.2		**Housewife**	**30**	**16.7**	**63.8**
store keeper	1	.6	2.1					
Service	**3**	**1.7**	**6.3**		infant	1	.6	2.1
					retiree	4	2.2	8.5
nurse	1	.6	2.1		student	0	0	0
teacher	1	.6	2.1		unemployed	6	3.3	12.8
Professional	**2**	**1.2**	**4.2**		**None**	**11**	**6.1**	**23.4**
Unknown	**1**	**.6**	**2.1**					

Note. Entries for categories in bold type summarize over the categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 15
Parental Place of Birth by Location: Frequency and Percent

Location	Frequency (Fathers)	Percent (Fathers)		Frequency (Mothers)	Percent (Mothers)
Austria	2	1.1		2	1.1
Britain	6	3.3		6	3.3
France	2	1.1		0	0
Germany	17	9.4		16	8.9
Ireland	18	10.0		13	7.2
Italy	3	1.7		3	1.7
Spain	1	.6		1	.6
Switzerland	2	1.1		2	1.1
Western European	**51**	**28.3**		**43**	**23.9**
Denmark	2	1.1		2	1.1
Finland	1	.6		1	.6
Norway	6	3.3		5	2.8
Sweden	7	3.9		7	3.9
Northern European	**16**	**8.9**		**15**	**8.4**
Czechoslavakia	2	1.1		2	1.1
Hungary	1	.6		1	.6
Macedonia	1	.6		1	.6
Russia	3	1.7		2	1.1
Yugoslavia	2	1.1		1	.6
Eastern European	**9**	**5.1**		**7**	**4.0**
China	1	.6		1	.6
Phillipines	1	.6		1	.6
Japan	1	.6		1	.6
Asian/Pacific Islander	**3**	**1.8**		**3**	**1.8**
Canada	9	5.0		6	3.3
FOREIGN BORN	**88**	**49.1**		**74**	**41.4**
Maine	3	1.7		1	.6
Massachusetts	5	2.8		4	2.2
New Jersey	1	.6		0	0
New York	3	1.7		4	2.2
Vermont	1	.6		1	.6
East Coast	**13**	**7.4**		**10**	**5.6**
Mississippi	1	.6		0	0
South Carolina	1	.6		0	0
Tennessee	1	.6		2	1.1
Virginia	2	1.1		4	2.2
West Virginia	0	0		1	.6
Southern States	**5**	**2.9**		**7**	**3.9**
Iowa	4	2.2		4	2.2
Kansas	1	.6		1	.6
Nebraska	2	1.1		2	1.1
Plains States	**7**	**3.9**		**7**	**3.9**

Continued on next page.

Table 15 (con'd)

Location	Frequency (Fathers)	Percent (Fathers)		Frequency (Mothers)	Perceent (Mothers)
Illinois	4	2.2		5	2.8
Indiana	4	2.2		3	1.7
Kentucky	1	.6		1	.6
Michigan	3	1.7		5	2.8
Minnesota	1	.6		2	1.1
Missouri	2	1.1		4	2.2
Ohio	4	2.2		6	3.3
Pennsylvania	5	2.8		3	1.7
Wisconsin	4	2.2		5	2.8
Midwest	**28**	**15.6**		**34**	**19.0**
California	0	0		2	1.1
New Mexico	1	.6		2	1.1
Texas	1	.6		1	.6
West Coast/Southwest	**2**	**1.2**		**5**	**2.8**
NON-MONTANA NATIVE BORN	**55**	**31.0**		**63**	**35.2**
Bozeman	0	0		1	.6
Stevensville	1	.6		1	.6
General Montana State	0	0		1	.6
MONTANA NATIVE BORN	**1**	**.6**		**3**	**1.8**
UNKNOWN	**35**	**19.4**		**40**	**22.2**

Note. Entries for categories in bold type summarize over the categories above them. Percentages do not sum precisely to 100% due to rounding error.

Table 16
Evaluating Physician Upon Admission: Frequency and Percent

Physician	Frequency	Percent		Physician	Frequency	Percent
A	51	28.3		J	2	1.1
B	40	22.2		K	2	1.1
C	34	18.9		L	2	1.1
D	17	9.4		M	1	.6
E	7	3.9		N	1	.6
F	4	2.2		O	1	.6
G	4	2.2		P	1	.6
H	3	1.7		Q	1	.6
I	3	1.7		Unknown	4	2.2

Table 17
Precipitating Factors Prior to Admission: Frequency and Percent

Precipitating Factor	Freq	Percent		Precipitating Factor	Freq	Percent
syphilis/lues	22	12.2		stroke/paralysis	3	1.7
worries	10	5.6		epilepsy	5	2.8
head/spinal injury	7	3.9		flu	2	1.1
female conditions	8	4.4		electric shock	1	.6
drug addiction	6	3.3		arteriosclerosis	3	1.7
alcohol addiction	21	11.7		apoplexy	1	.6
senility/presenility	40	22.2		attempted rape	1	.6
imbecility/idiocy/ mongoloidism	5	2.8		carbon monoxide poisoning	1	.6
Unkown	44	24.4				

Table 18
Presenting Symptoms Upon Admission: Frequency and Percent

Symptom	Frequency	Percent		Symptom	Frequency	Percent
delusions - grandeur	12	6.7		**Mental Deterioration**	**83**	**46.1**
delusions - persecution	36	20				
delusions - religion	8	4.4		**Mental Retardation**	**7**	**3.9**
delusions - senile	4	2.2				
delusions - general	42	23.3		Depression/Melancholia	33	18.3
Delusions	**102**	**56.7**				
				suicidality/self-destruction	9	5
hallucinations - auditory	14	7.8		violence	27	15
hallucinations - visual	6	3.3		**Suicidality/Violence**	**36**	**20**
halluciantions - general	49	27.2				
Hallucinations	**69**	**38.3**		paranoia/suspiciousness	6	3.3
				obsessions	1	.6
mania/delirium	24	13.3		**Paranoia/Obsessions**	**7**	**3.9**
psychomotor agitation	2	1.1				
Mania/Agitation	**26**	**14.4**		**No Symptoms**	**16**	**8.9**
Unknown	**2**	**1.1**				

Note. Entries of categories in bold type summarize those categories above them. Percentages exceed 100% because some patients were listed with up to three symptoms.

Table 19
Somatic Condition Upon Admission: Frequency and Percent

Condition	Frequency	Percent		Condition	Frequency	Percent
syphilis	28	15.6		deafness	5	2.8
gonorrhea	1	.6		hypochondriasis	2	1.1
paralysis/crippled	12	6.7		headaches	6	3.3
epilepsy/convulsions/seizures	16	8.9		head trauma	1	.6
blindness	6	3.3		substance abuse	7	3.9
Unknown	96	53.3				

Table 20
Primary Diagnosis Provided Upon Admission; Frequency and Percent

Diagnosis	Frequency	Percent
psychosis with cerebral hemorrhage	1	.6
psychosis with arteriosclerosis and mental deterioration	6	3.3
psychosis with organic changes of the nervous system	2	1.1
postoperative, toxic, or traumatic psychosis	4	2.2
undifferentiated psychosis	1	.6
Various Psychoses	**14**	**7.8**
dementia praecox - catatonic	1	.6
dementia praecox - paranoid	6	3.3
dementia praecox - simple	2	1.1
dementia praecox - general	1	.6
schizophrenia - hebephrenic	1	.6
schizophrenia - paranoid	2	1.1
Dementia Praecox and Schizophrenia	**13**	**7.2**
manic-depressive - depressed phase	19	10.6
manic depressive - manic/circular/mixed phase	4	2.2
manic depressive - manic phase	9	5.0
manic-depressive - general	1	.6
Manic Depressive	**33**	**18.3**
acute mania	2	1.1
hysteria	1	.6
Mania and Hysteria	**3**	**1.7**
involution melancholia/menopause	2	1.1
paranoid condition	4	2.2
psychoneuroses	1	.6
psychopathic personality without psychosis	1	.6
Other Psychological Diagnoses	**8**	**4.4**
senile dementia, confused and agitated state	3	1.7
senile dementia with paranoid and delusional trend	1	.6
senile psychoses	3	1.7
senility with arteriosclerosis	1	.6
senility with mental deterioration	7	3.9
senility with psychosis	12	6.7
Related to Aged/Senility	**27**	**15.0**
alcoholism with no psychosis	10	5.5
(chronic) alcoholism with psychosis	4	2.2
drug addiction/morphinism	2	1.1
drug addiction/morphinism without psychosis	4	2.2
Substance Abuse	**20**	**11.1**

Continued on next page

Table 20 (Con'd)
Primary Diagnosis Provided Upon Admission: Frequency and Percent

Symptom	Frequency	Percent
cerebrospinal (cerebrosyphilis) lues with mental deterioration	3	1 7
cerebrospial syphilis with psychosis	1	.6
paresis/early paresis/incipient paresis	3	1.7
general paresis/general paralysis of the insane	12	6.7
syphilis with psychosis	3	1.7
Syphilis-Related	**22**	**12.2**
arteriosclerosis with acute mania	1	.6
arteriosclerosis with (mental) deterioration	3	1.7
arteriosclerosis with psychosis	7	3.9
Heart Disease-Related	**11**	**6.1**
epilepsy with mental deterioration	4	2.2
epilepsy with psychosis	1	.6
Epilepsy-Related	**5**	**2.**
Mental Deficiency	**7**	**3.9**
Medical Exam - No Diagnosis	**2**	**1.1**
deferred - not insane	9	5 0
no psychosis demonstrated	5	2.8
Deferred or No Psychosis	**14**	**7.8**
Unknown	**1**	**.6**

Note. Entries for categories in bold type summarize categories above them.

Table 21
Secondary Diagnosis Provided Upon Admission: Frequency and Percent

Diagnosis	Freq	Percent		Diagnosis	Freq	Percent
psychosis	1	.6		psychoneurosis - psychasthenic type	1	.6
grand mal seizures	1	.6		syphilis-related	5	2.8
neurasthenia	1	.6		no psychosis	1	.6
arthritis deformens	1	.6		None Provided	169	93.9

Table 22

Evaluating Phsyician Upon Admission, by Gender; Frequency and Percent

Physician	Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)		Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
M	1	.6	.8		0	0	0
B	39	21.7	29.3		1	.6	2.1
J	0	0	0		2	1.1	4.3
N	0	0	0		1	.6	2.1
O	1	.6	.8		0	0	0
C	3	1.7	2.3		31	17.2	66.0
D	10	5.6	7.5		7	3.9	14.9
K	2	1.1	1.5		0	0	0
P	0	0	0		1	.6	2.1
E	7	3.9	5.3		0	0	0
A	50	27.8	37.6		1	.6	2.1
F	4	2.2	3.0		0	0	0
Q	1	.6	.8		0	0	0
H	3	1.7	2.3		0	0	0
L	2	1.1	1.5		0	0	0
I	3	1.7	2.3		0	0	0
G	3	1.7	2.3		1	.6	2.1
Unknown	4	2.2	3.0		2	1.1	4.3

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 23

Precipitating Factors Prior to Admission, by Gender; Frequency and Percent

Factor	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)		Females (Freq)	Females (Percent of Total)	Females (Percent of Females)
syphilis/lues	19	10.6	14.3		3	1.7	6.4
worries	10	5.6	7.5		0	0	0
head/spinal injury	6	3.3	4.5		1	.6	2.1
female conditions	0	0	0		8	4.4	17.0
drug addiction	3	1.7	2.3		3	1.7	6.4
alcoholism	18	10.0	13.5		3	1.7	6.4
senility/presenility	30	16.7	22.6		10	5.6	21.3
imbecility/idiocy/ mongoloid	3	1.7	2.3		2	1.1	4.2
stroke/paralysis	3	1.7	2.3		0	0	0
epilepsy	4	2.2	3.0		1	.6	2.1
flu	2	1.1	1.5		0	0	0
electric shock	1	.6	.8		0	0	0
arteriosclerosis	1	.6	.8		2	1.1	4.2
apoplexy	1	.6	.8		0	0	0
carbon monoxide poisoning	0	0	0		1	.6	2.1
attempted rape	1	.6	.8		0	0	0
Unknown	31	17.2	22.6		13	7.2	27.7

Note. Percentages do not precisely sum to 100% due to rounding error.

Table 24
Symptom Presentation Upon Admission, by Gender; Frequency and Percent

Symptom	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)	Females (Freq)	Females (percent of Total)	Females (Percent of Females)
delusions	76	42.2	57.1	26	14.4	55.3
hallucinations	45	25.0	33.8	24	13.3	51.1
mania and agitation	14	7.8	10.5	12	6.7	25.5
paranoia and obsessions	4	2.2	3.0	3	1.7	6.4
depression and melancholia	21	11.7	15.8	12	6.7	25.5
mental deterioration	67	37.2	50.4	16	8.9	34.0
mental retardation	6	3.3	4.5	1	.6	2.1
suicidality and violence	26	14.4	19.5	10	5.6	21.3
no symptoms	12	6.7	9.0	4	2.2	8.5
unknown	2	1.1	1.5	0	0	0

Note. Percentages do not precisely sum to 100% due to rounding error.

Table 25
Primary Diagnosis Provided Upon Admission, by Gender: Frequency and Percent

Diagnosis	Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)	Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
Various Psychoses	8	4.4	6.0	6	3.3	12.8
Dementia Praecox and Schizophrenia	13	7.2	10.0	0	0	0
Manic Depressive	19	10.6	14.3	14	7.8	30.0
Mania and Hysteria	2	1.1	1.5	1	.6	2.1
Other Psychological Diagnoses	4	2.2	3.0	4	2.2	8.5
Aged/Senility Related	21	11.7	15.8	6	3.3	12.8
Substance Abuse	16	8.9	12.0	4	2.2	8.5
Syphilis-Related	19	10.6	14.3	3	1.7	6.4
Heart Disease-Related	9	5	6.8	2	1.1	4.3
Epilepsy-Related	3	1.7	2.3	2	1.1	4.3
Mental Deficiency	5	2.8	3.8	2	1.1	4.3
Medical Exam - No Diagnosis	2	1.1	1.5	0	0	0
Deferred or No Psychosis	12	6.7	9.0	2	1.1	4.3
Unknown	0	0	0	1	.6	2.1

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 26
Classification of Treatment Received by Patients; Frequency and Percent

Treatment	Frequency	Percent
None	1	.6
General	158	87.8
Alternating	12	6.7
Examination/Consideration for Surgery	4	2.2
Restraints	4	2.2
Spinal Test	1	.6

Table 27
Medications Provided to Patients; Frequency and Percent

Medication	Frequency	Percent	Usage
Atropine	2	1.1	Anticholinergic
Barbital	1	.6	Barbituate
Cascara	36	20	Laxative
Digilin/Digitalis	12	6.7	Heart Medication
Ipral	4	2.2	Barbituate
Luminal	13	7.2	Barbituate
Magnesim Sulphate	92	51.1	Laxative
Mercury	15	8.3	
Morphine	7	3.9	Narcotic Analgesic
Salversan	9	5.0	
Tryparsamide	3	1.7	
None	48	26.7	

Note. The sum of percentages exceed 100% because some patients were listed with up to four differenct medications.

Table 28
Outcome of First Admission; Frequency and Percent

Outcome	Frequency	Percent
Death	87	48.3
Parole	59	32.8
Escape	16	8.9
Discharge without parole	6	3.3
Deportation to STATE of residency	3	1.7
Deportation to COUNTRY of residency	1	.6
Transfer to another hospital or institution	6	3.3
Returned to Prison	2	1.1

Table 29

Cause of Death for Patients Dying During First Admission: Frequency and Percent

Cause of Death	Frequency	Percent
Cerebrospinal syphilis	1	.6
Exhaustion of paresis/General paralysis of the insane	8	4.4
Syhilis-Related	**9**	**5.0**
Acute/chronic endocarditis - with mitral insufficiency	4	2.2
Arteriosclerosis with mental deterioration	1	.6
Arteriosclerosis with psychosis	2	1.1
Chronic myocarditis/myocardial degeneration	10	5.6
Coronary occlusion	2	1.1
General arteriosclerosis	10	5.6
Heart Disease-Related	**29**	**16.1**
Acute parenchymous nephritis	1	.6
Chronic (tubular) Nephritis	1	.6
Kidney Disease-Related	**2**	**1.2**
(Acute) pulmonary tuberculosis	2	1.1
Bronchopneumonia/pneumonia/lobar pneumonia	9	5.0
Lung Disease-Related	**11**	**6.1**
Cerebral Hemorrhage	**12**	**6.7**
Epilepsy-Related	**1**	**.6**
Carcinoma	2	1.1
Exhaustion of chorea (Huntington's Disease)	1	.6
Facial erysipelas	1	.6
General salftemia	1	.6
Influenza	1	.6
Obstructive jaundice	1	.6
Other General Medical Condition	**7**	**3.9**
Senile Deterioration/Exhaustion of Senile Psychosis/Dementia	**4**	**2.2**
Trauma to the Body	**1**	**.6**
Suicide	**1**	**.6**
Mental Deficiency/Insufficiency	**1**	**.6**
Exhaustion from acute mania	3	1.7
Exhaustion from manic depressive sidorder	1	.6
Psychological Functioning-Related	**4**	**2.3**
Did Not Die	**89**	**49.4**
Unknown	**5**	**2.8**

Table 30
Outcome of First Admission by Gender; Frequency and Percent

Outcome	Males (Freq)	Males (Percent of Total)	Males (Percent of Males)	Females (Freq)	Females (Percent of Total)	Females (Percent of Females)
Death	61	33.9	45.9	26	14.4	55.3
Parole	38	21.1	28.6	21	11.7	44.7
Escape	16	8.9	12.0	0	0	0
Discharge without Parole	6	3.3	4.5	0	0	0
Deportation to STATE of residency	3	1.7	2.3	0	0	0
Deportation to COUNTRY of residency	1	.6	.8	0	0	0
Transfer to another hospital or institution	6	3.3	4.5	0	0	0
Returned to prison	2	1.1	1.5	0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 31
Cause of Death for Patients Dying During First Admission by Gender; Frequency and Percent

Cause of Death	Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)	Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
Syphilis-Related	7	3.9	5.3	2	1.1	4.3
Heart Disease-Related	23	12.8	17.3	6	3.3	12.8
Kidney Disease-Related	0	0	0	2	1.1	4.3
Lung Disease-Related	9	5.0	6.8	2	1.1	4.3
Cerebral Hemorrhage	9	5.0	6.8	3	1.7	6.4
Epilepsy-Related	0	0	0	1	.6	2.1
Other General Medical Condition	4	2.2	3.0	3	1.7	6.4
Senile Deterioration/ Exhaustion of Senile Psychosis/Dementia	3	1.7	2.3	1	.6	2.1
Trauma to the Body	1	.6	.8	0	0	0
Suicide	1	.6	.8	0	0	0
Mental Deficiency	0	0	0	1	.6	0
Psychological Funcioning- Related	1	.6	.8	3	1.7	6.4
Did Not Die	68	3.8	51.1	21	11.7	44.7
Unknown	7	3.9	5.3	2	1.1	4.3

Note. Percentages do not sum to precisely 100% due to rounding error.

Table 32
Symptom Presention upon First Readmission; Frequency and Percent

Symptom	Frequency	Percent
Delusions	6	26.1
Hallucinations	6	26.1
Mental Deterioration	5	21.7
Depression/Melancholia	4	17.4
Suicidality/Violence	4	17.4
Paranoia/Obsessions	2	8.7
Mania/Agitation	2	8.7
None	2	8.7
Unknown	4	17.4

Note. Percentages sum in excess of 100% because some patients were listed with up to three different symptoms. This table is based upon the first readmission of patients (N = 23).

Table 33
Primary Diagnosis Provided upon First Readmission; Frequency and Percent

Diagnosis	Frequency	Percent
Various Psychoses	1	4.3
Dementia Praecox and Schizophrenia	4	17.4
Manic Depressive Disorders	5	21.7
Mania and Hysteria	1	4.3
Other Psychological Diagnoses	2	8.7
Related to Aged/Senility	2	8.7
Substance Abuse	3	13.0
Syphilis-Related	3	13.0
Epilepsy-Related	1	4.3
Mental Deficiency	1	4.3

Note. Percentages do not sum precisely to 100% due to rounding error. This table is based upon the first readmission of patients (N = 23).

Table 34
Symptom Presentation Upon Second Readmission; Frequency and Percent

Symptom	Frequency	Percent
Delusions	2	25.0
Hallucinations	2	25.0
Mental Deterioration	1	12.5
Depression/Melancholia	4	50.0
Paranoia/Obsessions	2	25.0
Suicidality/Violence	3	37.5

Note. Percentages sum in excess of 100% because some patients were listed with up to three symptoms. This table is based upon the second readmission of patients (N = 8).

Table 35
Marital Status, by Foreign or Native Born Status; Frequency and Percent

Marital Status	Foreign Born (Frequency)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Frequency)	Native (Percent of Total)	Native (Percent of Natives)
Divorced	0	0	0		15	8.3	11.7
Separated	1	.6	2.1		2	1.1	1.6
Married	15	8.3	31.3		54	30.0	42.2
Single	18	10.0	37.5		48	26.7	37.5
Widowed	14	7.8	29.2		7	38.9	5.5
Unknown	0	0	0		2	1.1	1.6

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 36
Classification of Occupation, by Foreign or Native Born Status; Frequency and Percent

Occupation	Foreign Born (Frequency)	Foreign (percent of Total)	Foreign (Percent of Foreigns)		Native Born (Frequency)	Native (Percent of Total)	Native (Percent of Natives)
Laborer	16	5.6	33.3		39	21.7	30.5
Service	6	3.3	12.5		22	12.2	17.2
Agriculture	11	6.1	22.9		21	11.7	16.4
Professional	1	.6	2.1		2	1.1	1.6
Housewife	10	5.6	20.1		20	11.1	15.6
Convict	1	.6	2.1		2	1.1	1.6
Student	0	0	0		3	1.7	2.3
Retired	2	1.1	4.2		6	3.3	4.7
Unemployed	1	.6	2.1		9	5.0	7.0
Infant	0	0	0		4	2.2	3.1

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 37

Precipitating Factors Contributing to Admission, by Foreign or Native Born Status:
Frequency and Percent

Factor	Foreign Born (Frequency)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Frequency)	Native (Percent of Total)	Native (Percent of Natives)
Syphilis	5	2.8	10.4		16	8.9	12.5
Worries	4	2.2	8.3		6	3.3	4.7
Head/Spinal Injury	1	.6	2.1		6	3.3	4.7
Female Conditions	4	2.2	8.3		4	2.2	3.1
Drug Addiction	1	.6	2.1		5	2.8	3.9
Alcoholism	5	2.8	10.4		15	8.3	11.7
Senility/Presenility	14	7.8	29.2		25	13.9	13.9
Imbecility/Idiocy/ Mongoloidism	0	0	0		5	2.8	3.9
Stroke/Paralysis	1	.6	2.1		2	1.1	1.6
Epilepsy	1	.6	2.1		4	2.2	3.1
Flu	0	0	0		2	1.1	1.6
Electric Schock	0	0	0		1	.6	.8
Arteriosclerosis	1	.6	2.1		2	1.1	1.6
Apoplexy	0	0	0		1	.6	8
Carbon Monoxide Poisoning	0	0	0		1	.6	8
Attempted Rape	0	0	0		1	.6	8
Unknown	11	6.1	22.3		32	17.8	25.0

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 38

Symptom Presentation Upon First Admission, by Foreign or Native Born Status:
Frequency and Percent.

Symptom	Foreign Born (Freq)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Freq)	Native (Percent of Total)	Native (Percent of Natives)
Delusions	32	17.8	66.7		68	37.8	53.1
Hallucinations	15	8.3	31.3		53	29.4	41.4
Mania/Agitation	6	3.3	12.5		20	11.1	9.0
Paranoia/Obsessions	0	0	0		7	3.9	5.5
Depression/Melancholia	14	7.8	29.2		19	10.6	14.8
Mental Deterioration	22	12.2	45.8		59	32.8	46.1
Suicidality/Violence	10	5.6	20.8		26	14.4	20.3
None	2	1.1	4.2		13	7.2	10.2
Unknown	0	0	0		1	.6	8

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 39

Primary Diagnosis Provided Upon First Admission, by Foreign or Native Born Status: Frequency and Percent

Diagnosis	Foreign Born (Freq)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Freq)	Native (Percent of Total)	Native (Percent of Natives)
Various Psychoses	4	2.2	8.3		10	5.6	7.8
Dementia Praecox and Schizophrenia	6	3.3	12.5		7	3.4	5.6
Manic-Depressive	8	4.4	16.7		25	13.9	19.5
Mania and Hysteria	2	1.1	4.2		1	.6	.8
Other Psychological Diagnoses	2	1.1	4.2		6	3.3	4.7
Aged/Senility Related	11	6.1	22.9		15	8.3	11.7
Substance Abuse	5	2.8	10.4		14	7.8	10.9
Syphilis Related	5	2.8	10.4		17	9.4	13.3
Heart Disease Related	3	1.7	6.3		8	4.4	6.3
Epilepsy Related	1	.6	2.1		4	2.2	3.1
Mental Deficiency	0	0	0		7	3.4	5.5
Medical Exam - No Diagnosis	0	0	0		1	.6	.8
Deferred or No psychosis	0	0	0		13	7.2	10.2
Unknown	1	.6	2.1		0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 40

Outcome of First Admission, by Foreign and Native Born Status: Frequency and Percent

Outcome	Foreign Born (Freq)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Freq)	Native (Percent of Total)	Native (Percent of Natives)
Death	27	56.3	56.3		58	32.2	45.3
Parole	13	27.1	27.1		45	25.0	35.2
Escape	3	6.3	6.3		13	7.2	10.2
Discharge without Parole	1	2.1	2.1		5	2.8	3.9
Deportation to STATE of Residency	0	0	0		3	1.7	2.3
Deportation to COUNTRY of nativity	1	2.1	2.1		0	0	0
Transfer to Another Hospital or Institution	2	4.2	4.2		4	2.2	3.2
Returned to Prison	1	2.1	2.1		0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born (N = 128) and foreign born (N = 48) patients.

Table 41
Cause of Death for First Admission; by Foreign and Native Born Status:
Frequency and Percent

Cause of Death	Foreign Born (Freq)	Foreign (Percent of Total)	Foreign (Percent of Foreigns)		Native Born (Freq)	Native (Percent of Total)	Native (Percent of Natives)
Syphilis Related	3	1.7	6.3		6	3.3	4.7
Heart Disease Related	13	7.2	27.1		16	8.9	12.5
Kidney Disease Related	0	0	0		2	1.1	1.6
Lung Disease Related	1	.6	2.1		10	5.6	7.8
Cerebral Hemorrhage	2	1.1	4.2		9	5.0	7.0
Epilepsy Related	0	0	0		1	.6	.8
Other General Medical Condition	3	1.7	6.3		3	1.7	2.3
Disease of the Aged	1	.6	2.1		3	1.7	2.3
Trauma to the Body	0	0	0		1	.6	.8
Suicide	0	0	0		1	.6	.8
Mental Deficiency	0	0	0		1	.6	.8
Psychological Functioning Related	2	1.1	4.2		2	1.1	1.6
Did Not Die	21	11.7	43.8		70	38.9	54.7
Unknown	2	1.1	4.2		3	1.7	2.3

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of native born ($\underline{N}$ = 128) and foreign born ($\underline{N}$ = 48) patients.

Table 42
Classification of Primary Diagnosis by Immigrant or Native
Born Status and Gender: Frequency and Percent

Diagnosis	Immigrant Males	Native Born Males	Immigrant Females	Native Born Females
Various Psychoses	3 (8.6)	5 (5.3)	1 (7.7)	5 (15.2)
Dementia Praecox and Schizophrenia	6 (17.1)	7 (7.4)	0 (0)	0 (0)
Manic Depressive	5 (14.3)	14 (14.7)	3 (23.1)	11 (33.3)
Mania and Hysteria	2 (5.7)	0 (0)	0 (0)	1 (3.0)
Other Psychological Diagnoses	0 (0)	4 (4.2)	2 (15.4)	2 (6.1)
Aged/Senility Related	9 (25.7)	11 (11.6)	2 (15.4)	4 (12.1)
Substance Abuse	4 (11.4)	12 (12.6)	1 (7.7)	2 (6.1)
Syphilis Related	3 (8.6)	16 (16.8)	2 (15.4)	1 (3.0)
Heart Disease Related	2 (5.7)	7 (7.4)	1 (7.7)	1 (3.0)
Epilepsy Related	1 (2.9)	2 (2.1)	0 (0)	2 (6.1)
Mental Deficiency	0 (0)	5 (5.3)	0 (0)	2 (6.1)
Medical Exam - No Diagnosis	0 (0)	1 (1.1)	0 (0)	0 (0)
Deferred - No Psychosis	0 (0)	11 (11.6)	0 (0)	2 (6.1)

Note. Percentages do not sum precisely to 100% due to rounding error. Values in cells represent frequency for each diagnosis and percent of that category (immigrant or native, male or female) in parentheses.

Table 43
Marital Status by Rural and Urban Status: Frequency and Percent

Marital Status	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)	Urban (Frequency)	Urban (Percent of Total)	Urban (Percent of Urban)
Divorced	12	6.7	12.1	3	1.7	42.9
Separated	2	1.1	2.0	1	.6	14.3
Married	36	20.0	36.4	30	16.7	42.9
Single	36	20.0	36.4	25	13.9	35.7
Widowed	11	6.1	11.1	11	6.1	15.7
Unknown	2	1.1	2.0	0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based upon sub-samples of rural (N = 99) and urban (N = 70) individuals.

Table 44
Classification of Occupation by Rural and Urban Status:
Frequency and Percent

Occupation	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)		Urban (Frequency)	Urban (Percent of Total)	Urban (Percent of Urban)
Laborer	33	18.3	33.3		18	10.0	25.7
Service	7	3.9	7.1		18	10.0	25.7
Agriculture/ Ranching	28	15.6	28.3		3	1.7	4.3
Professional	0	0	0		3	1.7	4.3
Housewife	16	8.9	16.2		14	7.8	20.0
COnvict	4	2.2	4.0		0	0	0
Student	1	.6	1.0		2	1.1	2.3
Retired	5	2.8	5.1		4	2.2	5.7
Unemployed	4	2.2	4.0		5	2.8	7.1
Infant	1	.6	1.0		3	1.7	4.3

Note. Percentages do not sum precisely to 100% due to rounding error. Information is based on sub-samples of rural ($\underline{N}$ = 99) and urban ($\underline{N}$ = 70) individuals.

Table 45

Precipitating Factors Contributing to Admission by Rural and Urban Status: Frequency and Percent

Factor	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)	Urban (Frequency)	Urban (Percent of Total)	Urban (Percent Of Urban)
Syphilis	13	7.2	13.1	8	4.4	11.4
Worries	6	3.3	6.1	1	.6	1.4
Head/Spinal Injury	5	2.8	5.1	2	1.1	2.9
Female Conditions	5	2.8	5.1	3	1.7	4.3
Drug Addiction	0	0	0	2	1.1	2.9
Alcoholism	8	4.4	8.1	12	5.6	17.1
Senility/Presenility	22	12.2	22.2	18	10.0	25.7
Imbecility/Idiocy/ Mongoloidism	2	1.1	2.0	3	1.7	4.3
Stroke/Paralysis	3	1.7	3.0	0	0	0
Epilepsy	3	1.7	3.0	2	1.1	2.9
Flu	1	.6	1.0	1	.6	1.4
Electric Shock	1	.6	1.0	0	0	0
Arteriosclerosis	2	1.1	2.0	1	.6	1.4
Apoplexy	0	0	0	1	.6	1.4
Carbon Monoxide Poisoning	1	.6	1.0	0	0	0
Attempted Rape	0	0	0	1	.6	1.4
Unknown	27	15.0	27.3	15	8.3	21.4

Note. Percentage do not sum precisely to 100% due to rounding error. Infomraion is based upon sub-samples of rural ($\underline{N}$ = 99) and urban ($\underline{N}$ = 70) individuals.

Table 46

Presenting Symptoms Upon First Admission by Rural and Urban Status: Frequency and Percent

Symptom	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)	Urban (Frequency)	Urban (Percent of Total)	Urban (Percent of Urban)
Delusions	57	31.7	57.6	39	21.7	55.7
Hallucinations	41	22.8	41.4	25	13.9	35.7
Mania and Agitation	12	6.7	12.1	13	7.2	18.6
Paranoia and Obsessions	5	2.8	5.1	2	1.1	2.9
Depression	23	12.8	23.2	8	4.4	11.4
mental Deterioration	48	26.7	48.5	33	18.3	47.1
Mental Retardation	3	1.7	3.0	4	2.2	5.7
Suicidality and Violence	23	12.8	23.2	11	6.1	15.7
None	2	1.1	2.0	9	5.0	12.9
Unknown	2	1.1	2.0	0	0	0

Note. Percentages sum in excess of 100% due to some patients being listed with up to three symptoms.

Table 47
Primary Diagnosis Upon First Admission by Rural or Urban Status; Frequency and Percent

Diagnosis	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)		Urban (Frequency)	Urban (Percent of total)	Urban (Percent of Urban)
Various Psychoses	6	3.3	6.1		7	3.9	10.0
Dementia Praecox and Schizophrenia	9	5.0	9.1		2	1.1	2.9
Manic Depressive	2	1.1	2.0		12	6.7	14.3
Mania and Hysteria	1	.6	1.0		1	.6	1.4
Other Psychological Diagnoses	5	2.7	5.1		3	1.7	4.3
Aged/Senility Related	16	8.9	16.2		11	6.1	15.7
Substance Abuse	4	2.2	4.0		11	6.1	15.7
Syphilis Related	13	7.2	13.1		9	5.0	12.9
Heart Disease RElated	6	3.3	6.1		5	2.7	7.1
Epilepsy Related	3	1.7	3.0		2	1.1	2.9
Mental Deficiency	4	2.2	4.0		3	1.7	4.3
Medical Exam - No Diagnosis	2	1.1	2.0		0	0	0
Deferred or No Psychosis	9	5.0	9.1		4	2.2	5.7
Unknown	1	.6	1.0		0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 48
Outcome of First Admission by Rural or Urban Status; Frequency and Percent

Outcome	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)		Urban (Frequency)	Urban (Percent of Total)	Urban (Percent of Urban)
Death	47	26.1	47.5		38	21.1	54.3
Parole	30	16.7	30.3		26	14.4	37.1
Escape	12	6.7	12.1		1	.6	1.4
Discharge (without parole)	4	2.2	4.0		2	1.1	2.9
Deportation to STATE of residency	0	0	0		1	.6	1.4
Deportation to COUNTRY of nativity	0	0	0		0	0	0
Transfer to Another Hospital/Institution	4	2.2	4.0		2	1.1	2.9
Return to Prison	2	1.1	2.0		0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 49
Cause of Death at First Admission by Rural and Urban Status; Frequency and Percent

Cause of Death	Rural (Frequency)	Rural (Percent of Total)	Rural (Percent of Rural)		Urban (Frequency)	Urban (Percent of Total)	Urban (Percent of Urban)
Syphilis Related	5	2.8	5.1		4	2.2	5.6
heart Disease Related	13	7.2	13.1		16	8.9	14.3
Kidney Disease Related	1	.6	1.0		1	.6	1.4
Lung Disease Related	6	3.3	6.1		5	2.7	7.1
Cerebral Hemorrhage	8	4.4	8.1		4	2.2	5.6
Epilepsy Related	1	.6	1.0		0	0	0
Other General Medical Condition	4	2.2	4.0		2	1.1	2.9
Disease of the Aged	3	1.7	3.0		1	.6	1.4
Trauma to the Body	1	.6	1.0		0	0	0
Suicide	1	.6	1.0		0	0	0
mental Deficiency	0	0	0		1	.6	1.4
Psychological Functioning Related	3	1.7	3.0		1	.6	1.4
Did Not Die	52	28.9	5.3		32	17.8	45.7
Unknown	1	.1	1.0		3	1.7	4.3

Note. Percentages do not sum precisely to 100% due to rounding error.

Table 50
Marital Status by Rural and Urban Status by Gender; Frequency and Percent

Marital Status	Rural Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)	Rural Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
Divorced	11	6.1	14.3	1	.6	4.6
Separated	2	1.1	2.6	0	0	0
Married	24	13.3	31.2	12	6.7	54.5
Single	23	12.8	29.9	4	2.2	18.2
Widowed	7	3.9	9.1	4	2.2	18.2
Unknown	1	.6	1.3	1	.6	4.5

Marital Status	Urban Males (Frequency)	Males (Percent of Total)	Males (Percent of Males)	Urban Females (Frequency)	Females (Percent of Total)	Females (Percent of Females)
Divorced	3	1.7	6.4	0	0	0
Separated	0	0	0	1	.6	4.3
Married	18	10.0	38.3	12	6.7	52.2
Single	21	11.7	44.7	4	2.2	17.4
Widowed	5	2.8	10.6	6	3.3	26.1
Unknown	0	0	0	0	0	0

Note. Percentages do not sum precisely to 100% due to rounding error.

Figure 1
<u>Ages of Patients at First Admission</u>

Figure 2
Number of Years Patient Had Been Residing in Montana Before First Admission

Figure 3
<u>Year of First Admission</u>

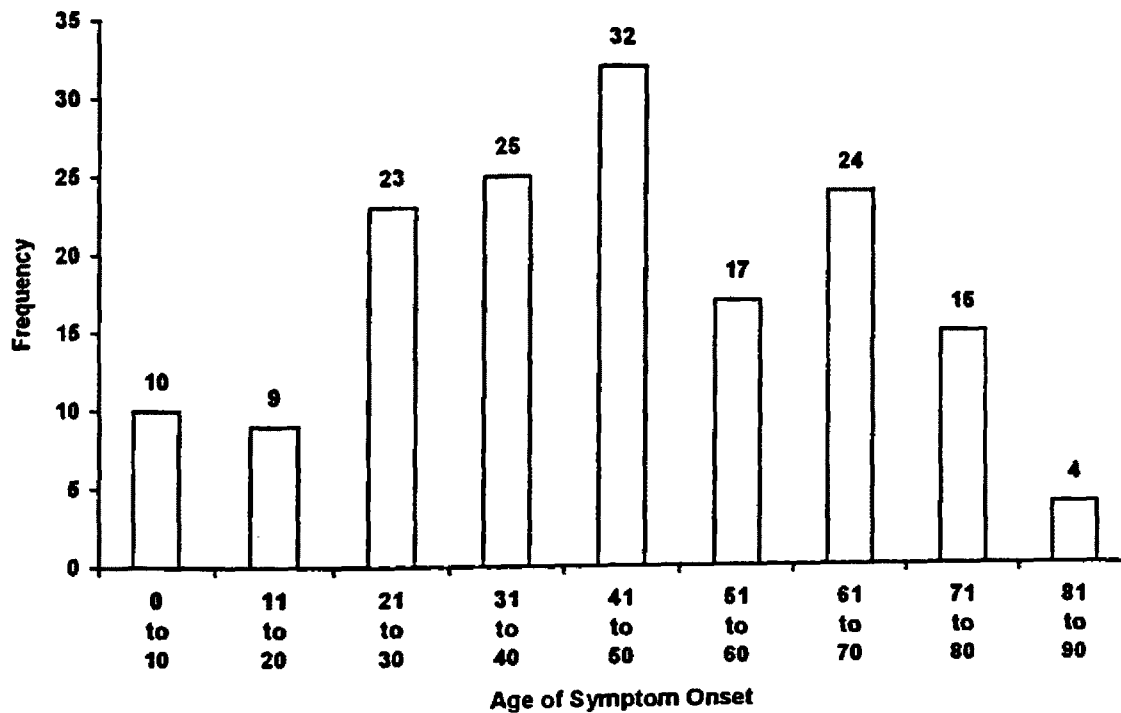Year of Admission

Figure 4
Age Ranges of Symptom Onset for First Admission
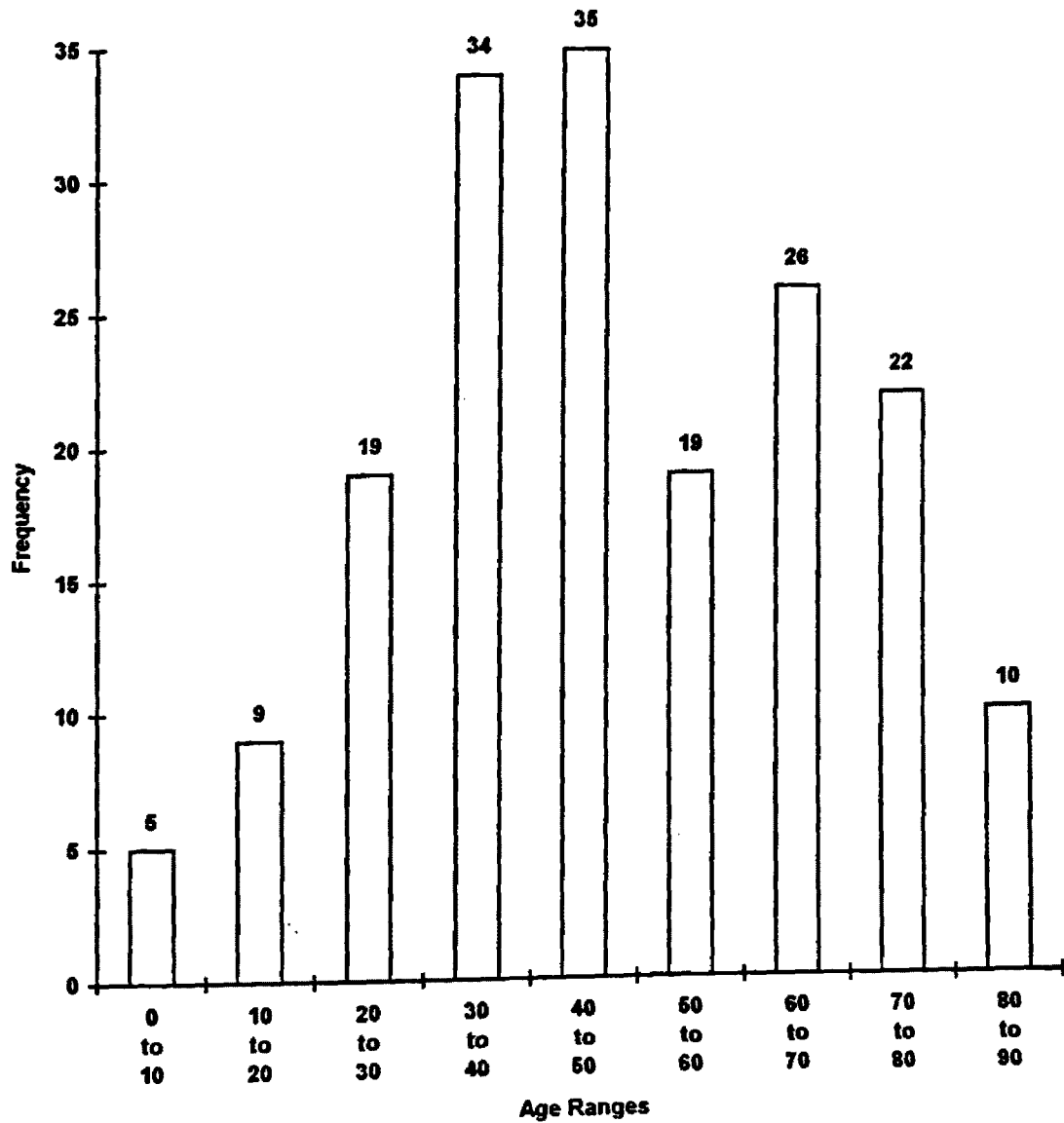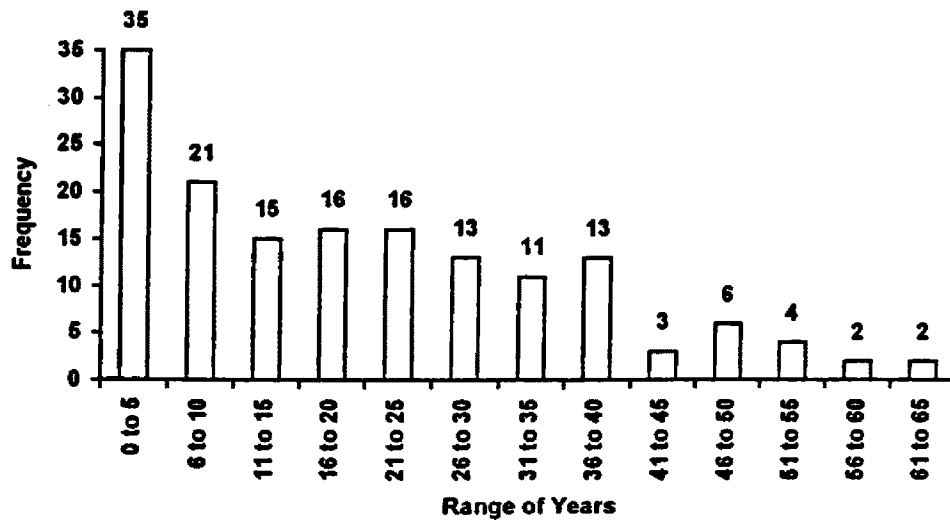
Note. Graph is based upon patients with listed information. Patients without listed information were excluded (N = 21).

Figure 5

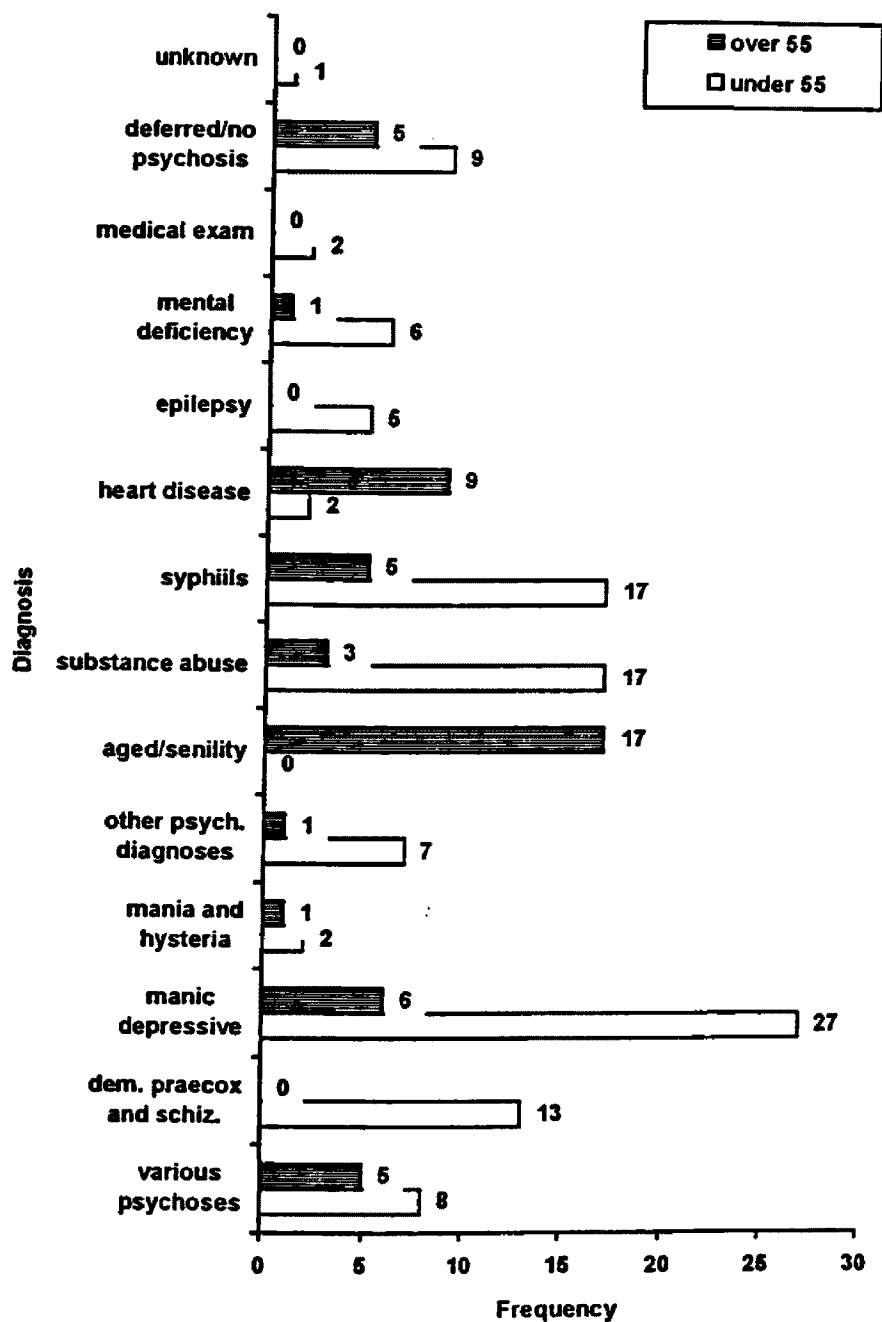Classification of Primary Diagnosis Upon First Admission by Age Group
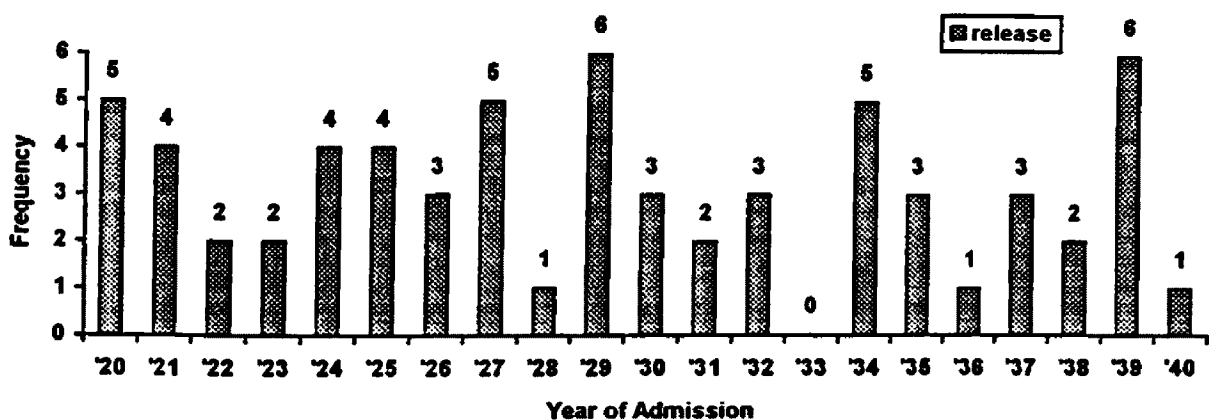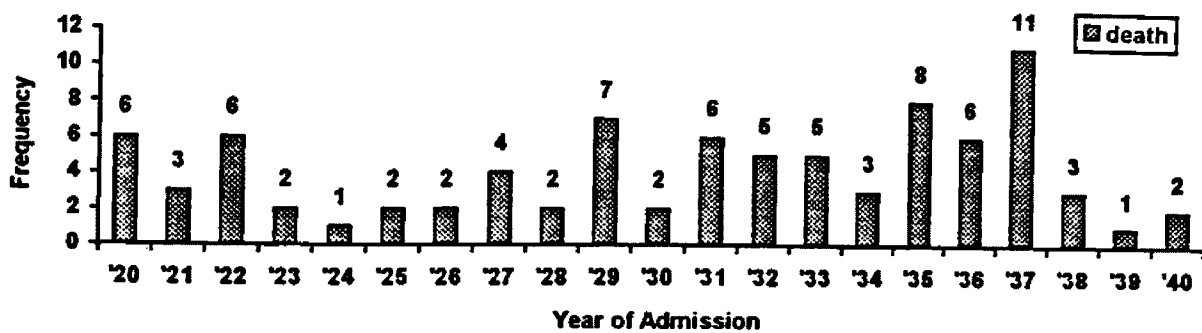
Figure 6
Outcome of First Hospitalization By Year of Admission
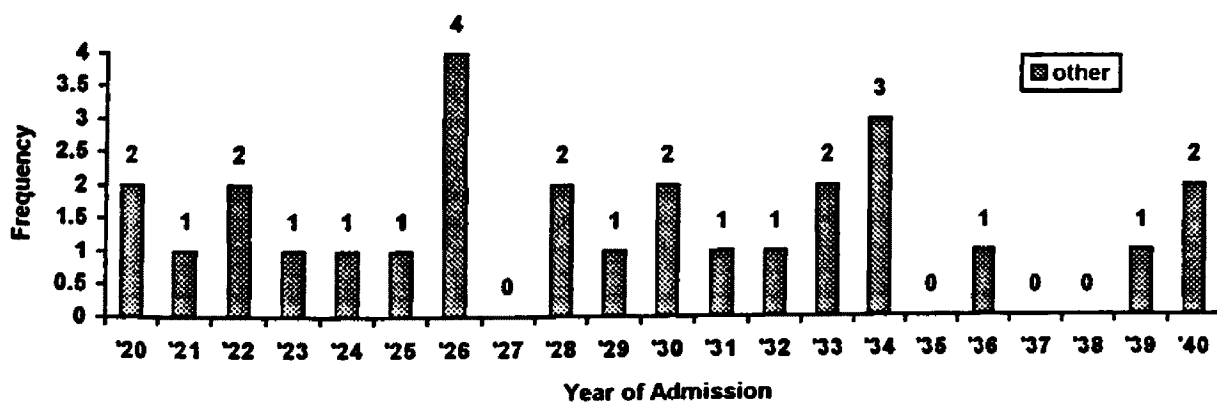
Figure 7

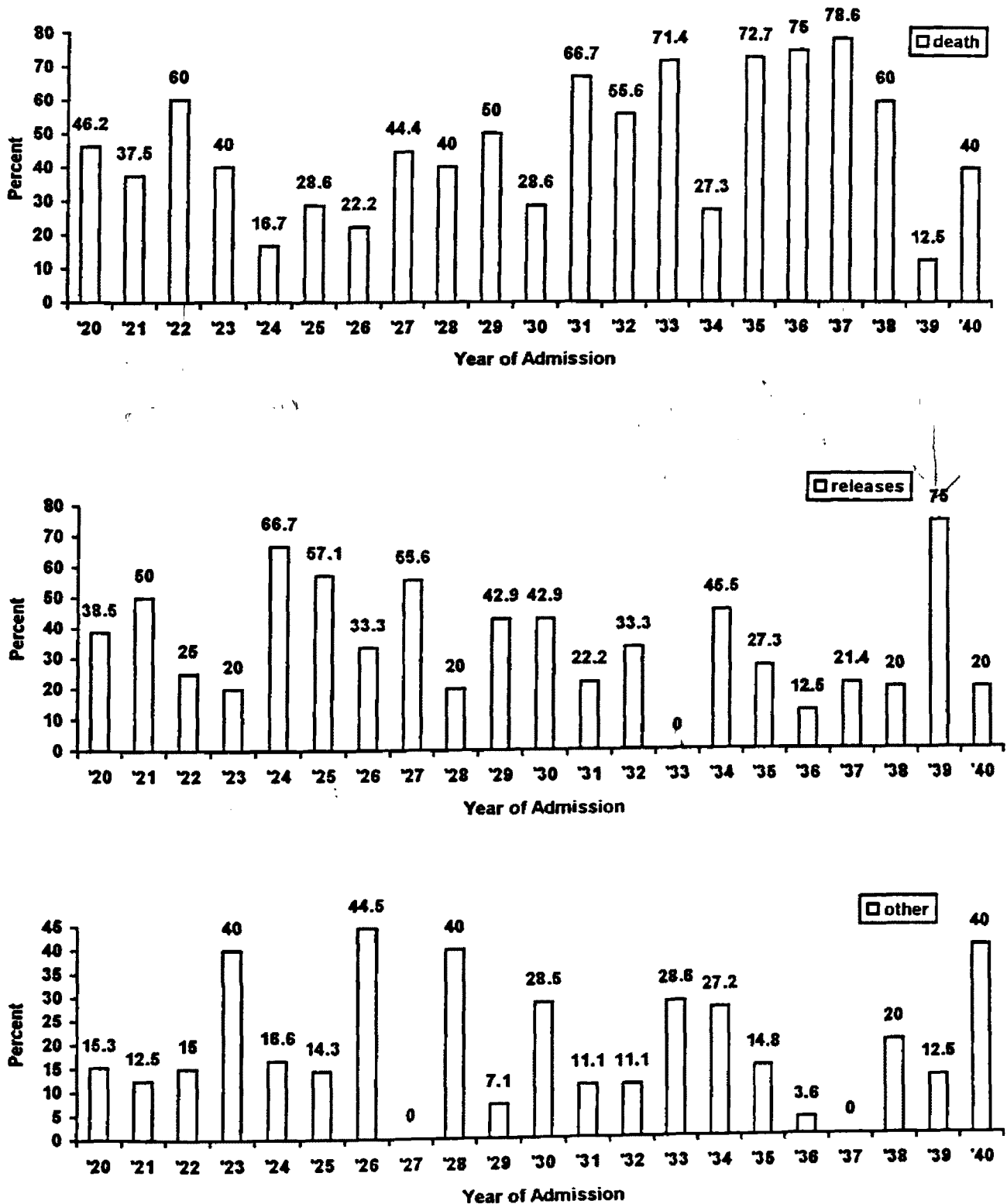<u>Outcome of First Admission as a Percentage of Total Admissions by Year of Admission</u>

Figure 8
Examination of Specific Diagnoses Over Year of Admission