



WOMEN'S HEALTH IN
NEW ZEALAND:

A Statistical overview 1968-1983

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Julie Bunnell

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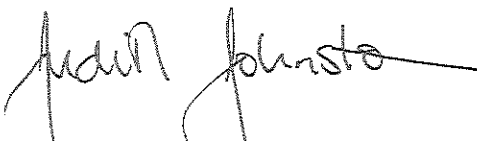
FOREWORD

Women's health is an enormous and complex area covering all aspects of women's lives. In New Zealand, women's health is now being seen as a priority area for research, for policy and for action. In 1985 at the end of the Decade for Women, Dr Mahler, Director-General of the World Health Organisation, said:

... there is now more discussion of women's problems, more advocacy of their rights, more understanding of their position. There is also a new awareness by women themselves. Where previously they had taken their subservient role in society as part of the natural order, they are now beginning to question long-established values and social norms. Some of this has been translated into action. Politicians have taken up women's issues; governments have enacted laws outlawing discrimination, giving women equal rights and status, protecting them from exploitation. However, the amount of resources devoted to implementing and enforcing such changes bears no relation to the political commitment expressed, far less to real needs.

In terms of women's health, Dr Mahler stressed that it is only a beginning. This research is also a beginning. It looks at women's health statistics in New Zealand and reviews what we can learn from such data and provides a context within which to develop women's health policies. It focuses on what the statistics do not reveal and identifies issues for ongoing research.

There are many perspectives on women's health. This is one. There is much more to do in this area, particularly in terms of developing new ways of measuring women's health status and well-being. This discussion paper is a most significant starting point.



Dr Judith Johnston
Director, Health Services Research and Development Unit

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Julie Bunnell
September 1987

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INTRODUCTION

The purpose of this paper is to consider the current health status of New Zealand women. The term "health" has diverse meanings, and includes physical, mental, social, and spiritual components. Not all of these aspects, or the many factors that impinge upon them, are readily susceptible to measurement, description, or interpretation. In this paper a fairly traditional analysis of health is undertaken. The focus is general, rather than detailed, and the emphasis is on description, rather than interpretation. The relevant time period is from 1968 to 1983. This choice of time span reflects both a concern with contemporary trends in women's health, and limitations imposed by the availability of comparable data.

The paper is divided into three main sections: mortality, morbidity, and mental health. These are the areas for which national data is available on a continuing basis, in the form of annual publications by the National Health Statistics Centre. By providing a concise written description of the main features and trends to be found in this data, a clearer picture of the health experience of women in New Zealand should emerge. It is well to remember, however, that mortality, morbidity, and mental health data are collected when individuals make contact with the established health care system. Such contact therefore reflects physical or mental distress — that is, the absence of health. Improvements in health are inferred from reductions in the various indicators of disease and illness.

Interpretation of data concerning women requires some baseline or frame of reference. A single number in isolation is often not very informative, but comparisons of different populations at a particular point in time, or of the same population over time, can be much more useful.

The most obvious reference or comparison group for New Zealand women is New Zealand men, and in each of the subsequent sections the data for females and males will be compared.

Sex is not the only factor impinging upon health status. Age, ethnicity, and socioeconomic status are also important determinants. In the following sections breakdowns by age are used where appropriate. Ethnic comparisons between Maori and non-Maori women are made for the mortality and the mental health data. An ethnic comparison for the morbidity data, although desirable, is not possible using the currently available health statistics. No breakdowns or comparisons based on socioeconomic status are given, as this factor is not currently used by the National Health Statistics Centre in their collection of data.

Although my intent is to provide a summary description of the available statistics, without attempting to ascertain underlying causative factors,

some preliminary comments are necessary. Observed differences in health status between men and women may reflect a biologic (genetic or hormonal) difference in risk of disease. In other cases it may reflect lifestyle differences between men and women, particularly with respect to risk-taking behaviours, that affect disease risk. Alternatively, a difference in health status may indicate different patterns of behaviour on the part of male and female health care consumers. Or the diagnostic and treatment behaviour of health care professionals may vary as a function of the client's sex. (See, for example, Nathanson, 1977; Ortmeyer, 1979; Verbrugge, 1979.) Thus, finding a difference between women and men is but a first step. Discovering the underlying reason(s) for an observed difference requires comprehensive and multifaceted research. In some areas this research effort has commenced, but consideration of such research is beyond the scope of this paper.

MORTALITY

The first major area to be considered is that of mortality, or death. This area can be approached from several different directions, so that attention is focused on different aspects of mortality. Life expectancy data is concerned with the average age at death. Mortality rates indicate the frequency of death per year in a particular age, sex, and/or ethnic group. Examination of the leading causes of death reveals the reasons for death, and is potentially the most useful information. Knowledge of the major causes of death permits resources for prevention and/or cure to be allocated where they are most needed, or are most likely to be beneficial.

Life Expectancy

Life expectancy at birth, at age 40, and at age 60 is shown in Tables 1A, 1B, and 1C, respectively, for the period from 1965-67 to 1980-82. (These data are taken from the New Zealand Life Tables, which are constructed around the census years. Accordingly, the years used in Table 1 do not correspond precisely to those used elsewhere in this paper.) At each age female life expectancy is greater than male life expectancy, and non-Maori life expectancy is greater than Maori life expectancy.

Certain changes over time can also be observed. Both the absolute gain in years of life expectancy and the percentage gain from 1965-67 to 1980-82 are also shown in Tables 1A, 1B, and 1C. Absolute and percentage gains follow approximately the same pattern. The largest gains in life expectancy have been experienced by Maori women, and the smallest by Maori men. Non-Maori women and non-Maori men have shown approximately equal gains, except in the "at age 60" figure, where women have fared better than men.

One consequence of these changes in life expectancy are that the ethnic difference has decreased, especially for women. For example, the ethnic difference in the "at birth" figure has dropped from 10.06 to 8.46 years for females, and from 7.23 to 6.98 years for males.

Another consequence is that the sex differential has increased for Maoris, although not to the level of the non-Maori sex differential. For example, the sex differential in the "at birth" figure has increased from 3.34 to 4.65 for Maoris, whereas the corresponding sex differential has remained static at just over six years for non-Maoris.

The greater longevity of women is common to many Western countries. As a result of this difference between the sexes in life expectancy, women increasingly outnumber men at older ages. In 1983, for example, females comprised 57.9% of the population aged 65 and over, 63.5% of the

population aged 75 and over, and 73.9% of the population aged 85 and over.

TABLE 1A: LIFE EXPECTANCY AT BIRTH

Year	Non-Maori Females	Maori Females	Non-Maori Males	Maori Males
1965-67	74.84	64.78	68.67	61.44
1970-72	75.16	64.96	69.09	60.96
1975-77	75.88	67.75	69.37	63.35
1980-82	76.95	68.49	70.82	63.84
Gain	2.11	3.71	2.15	2.40
Percentage	2.8	5.7	3.1	3.9

TABLE 1B: LIFE EXPECTANCY AT AGE 40

Year	Non-Maori Females	Maori Females	Non-Maori Males	Maori Males
1965-67	37.16	29.10	32.23	27.49
1970-72	37.46	29.22	32.40	26.56
1975-77	38.14	30.94	32.79	27.77
1980-82	38.87	31.93	33.74	28.12
Gain	1.71	2.83	1.51	0.63
Percentage	4.6	9.7	4.7	2.3

TABLE 1C: LIFE EXPECTANCY AT AGE 60

Year	Non-Maori Females	Maori Females	Non-Maori Males	Maori Males
1965-67	19.68	15.09	15.82	12.89
1970-72	19.91	14.60	15.82	12.96
1975-77	20.55	16.23	16.17	13.55
1980-82	21.17	16.36	16.74	13.39
Gain	1.49	1.27	0.92	0.50
Percentage	7.6	8.4	5.8	3.9

Source: New Zealand Life Tables, 1975-77. Gain refers to the absolute gain in years; Percentage refers to the percentage increase on the 1965-67 figure.

Mortality Rates

Another means of examining trends in mortality is to consider age-standardised mortality rates. The age standardisation is particularly important if ethnic comparisons are to be made, since the age structure of the Maori population is quite different to that of the non-Maori population. Here the standardisation is to the 1968 total population, separately for each sex.

Both sexes and ethnic groups show a decline in mortality rates for the period 1968-1983 (Figure 1). The largest decline in mortality rates was shown by Maori females, who had the highest mortality rates of all four groups in 1968. The smallest decline in mortality rates was shown by non-Maori females, who continue to experience the most favourable mortality rates.

When mortality-sex ratios are constructed, using the male rates as the numerator and female rates as the denominator, different patterns emerge for the two ethnic groups (Figure 1). The mortality-sex ratio for non-Maoris shows little change over the years 1968 to 1983, reflecting the almost parallel improvement in male and female mortality rates. The mortality-sex ratio for Maoris, however, increases from 1968 to 1983, reflecting the greater improvement in female mortality rates.

An examination of female age-specific mortality rates for the total population indicates that the improvement in mortality rates varied according to age group. The greatest reductions in mortality rates occurred for females over the age of 64 and under the age of 1. The age group 45-64 also experienced a small reduction in mortality rates, whereas the reductions were minimal for the 25-44 and 1-14 age groups. Figure 2 shows these changes.

General Causes of Death

The leading causes of death, considered in terms of broad categories, have shown little change over the past 15 years. In descending order, the four major causes of death are circulatory system disease, neoplasms, respiratory system disease, and external causes of injury and poisoning. The category "neoplasms" primarily comprises malignant neoplasms, or cancer; hereafter the term "cancer" will imply the slightly broader category of neoplasms. The category "external causes of injury and poisoning" includes accidents, poisoning, suicide, homicide, and other adverse effects. Hereafter the term "accidents" will be used as a synonym for this category.

From 1968 to 1983, the percentage of total deaths attributable to circulatory system disease has decreased slightly while the percentage of total deaths due to neoplasms has increased slightly. The percentages of total deaths due to respiratory system disease and accidents have remained fairly constant.

Figure 1

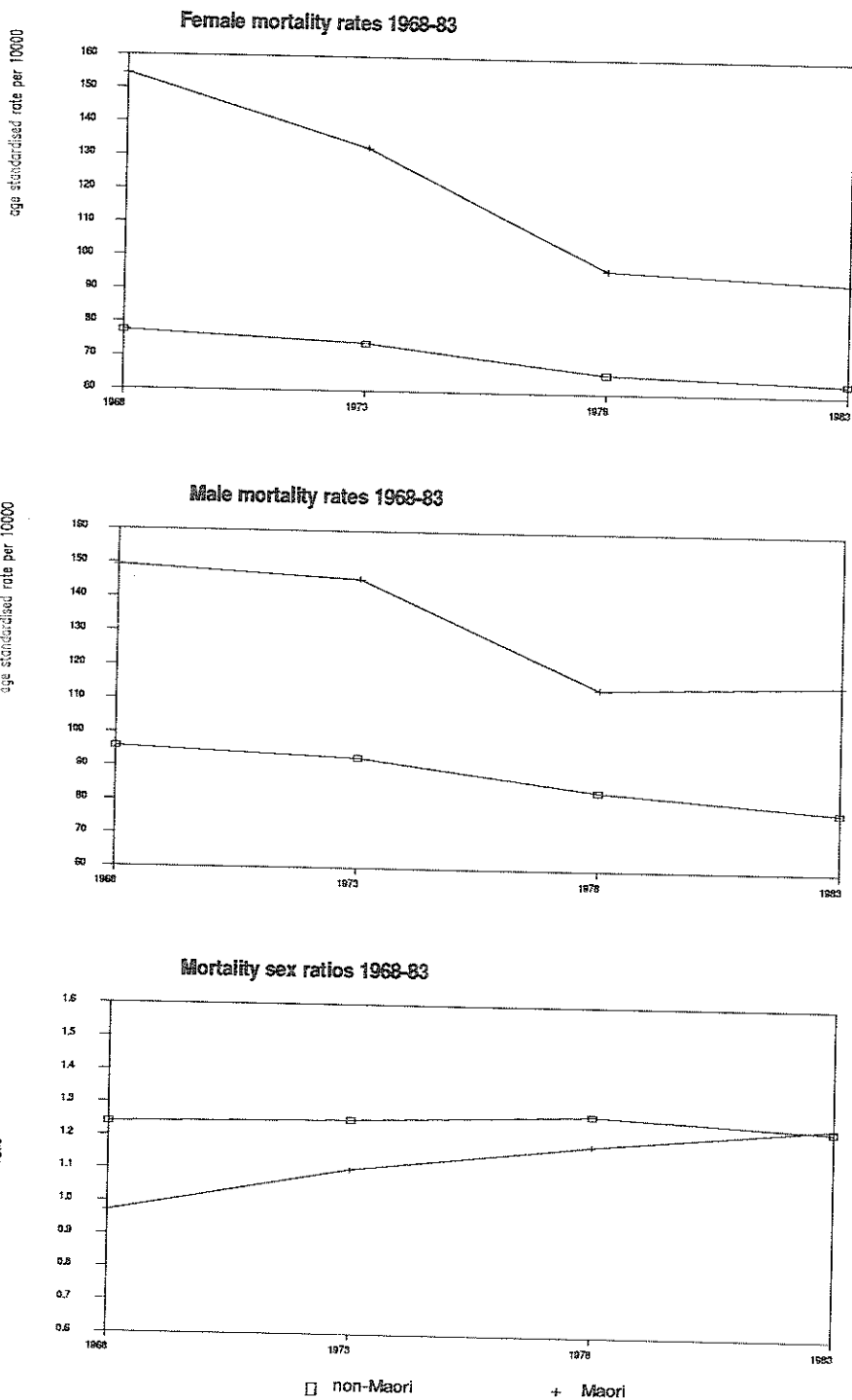
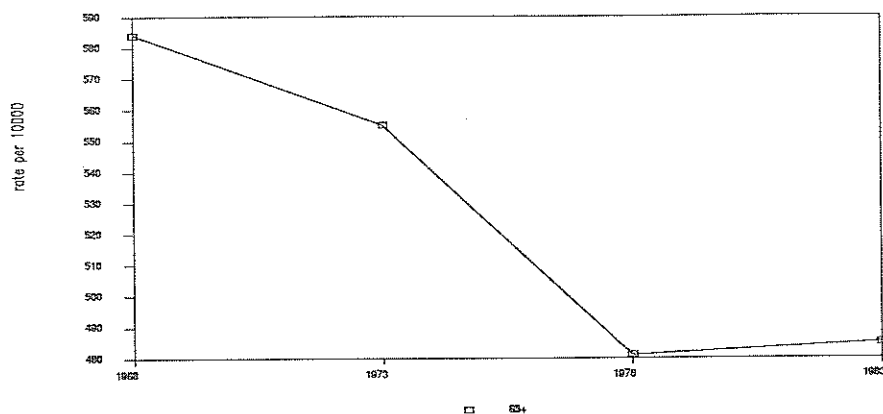
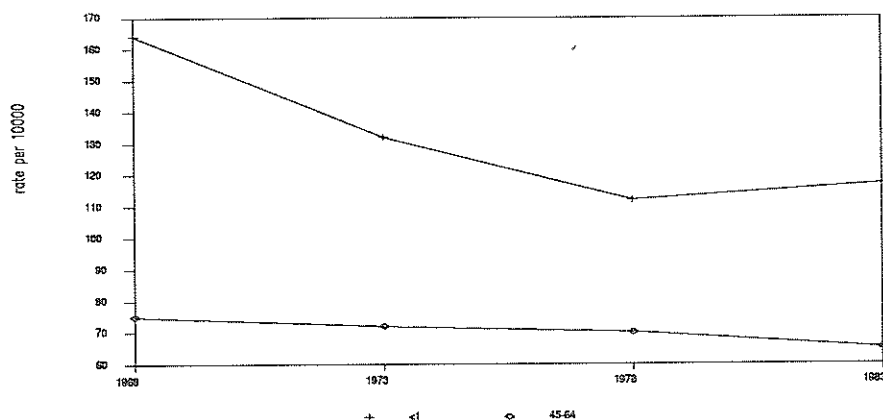


Figure 2

Female age-specific mortality 1968-83



Female age-specific mortality rates



Female age-specific mortality rates

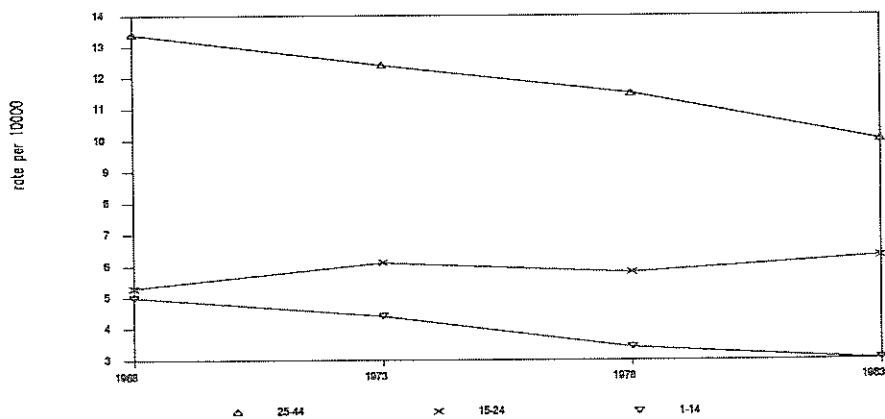


Figure 3 shows the proportions of deaths attributable to the four major categories for each sex and ethnic group in 1983. Males and females show very similar patterns. The main difference is that a greater percentage of male deaths result from accidents than is the case for females. The percentage of deaths due to respiratory system disease is slightly higher for males than for females, whereas the percentages of deaths due to circulatory system disease and neoplasms are slightly higher for females than for males.

The leading causes of death for Maori people are the same as those for non-Maori people. However, circulatory system disease accounts for a smaller proportion of deaths among Maoris than among non-Maoris, whereas accidents account for a greater proportion of deaths among Maoris than among non-Maoris. Both of these observations can be linked to the differing age structures of the two populations, as can the additional observation that the four leading causes of death account for a smaller proportion of total deaths for Maoris than for non-Maoris.

Specific Causes of Death

Specific causes of death can be identified within each of the four general categories discussed above. A closer examination of these specific causes is warranted, since it is often in these more limited measures that trends over time and/or differences between the sexes are apparent.

The main circulatory system diseases are ischaemic heart disease and cerebrovascular disease. The three main fatal sites of cancer in women are the breast, the colon (large intestine), and the lung. For men, the main fatal sites of cancer are the lung, the prostate, and the colon. The main respiratory system diseases are (a) pneumonia and influenza and (b) chronic obstructive pulmonary disease, which encompasses bronchitis, emphysema, and asthma. The main external causes of injury and poisoning are motor vehicle accidents, accidental falls, and suicide.

Table 2 shows the rates for women for these ten specific causes of death for the years 1968, 1973, 1978, and 1983. Three important trends can be seen in Table 2. There has been a small but consistent decrease in the mortality rate for cerebrovascular disease. There has been a substantial monotonic increase in the lung cancer mortality rate, and a smaller monotonic increase in the mortality rate for chronic obstructive pulmonary disease.

Table 3 presents the 1983 mortality-sex ratios for nine of these specific causes of death, as well as for the four general categories. Mortality-sex ratios, which are simply the ratio of the male rate to the female rate, are a way of quantifying the sex differential. Since mortality-sex ratios are independent of the actual rates, they are particularly useful for comparative purposes.

Figure 3: MAJOR CAUSES OF DEATH

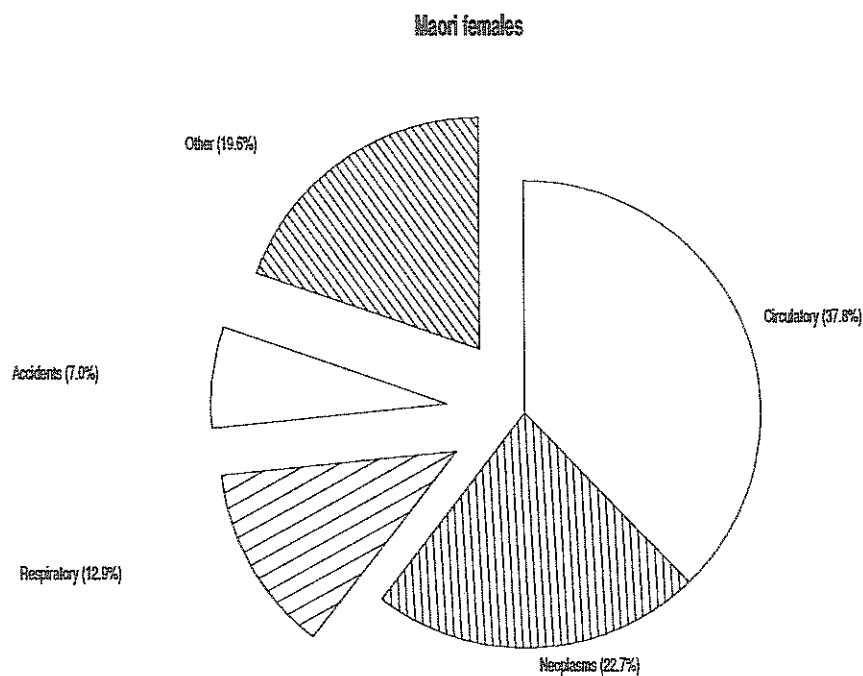
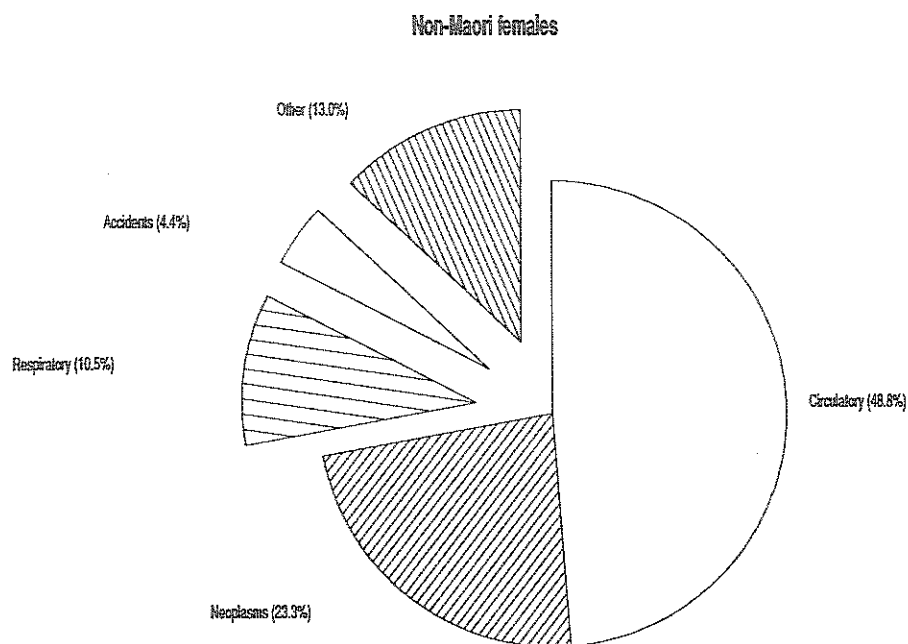
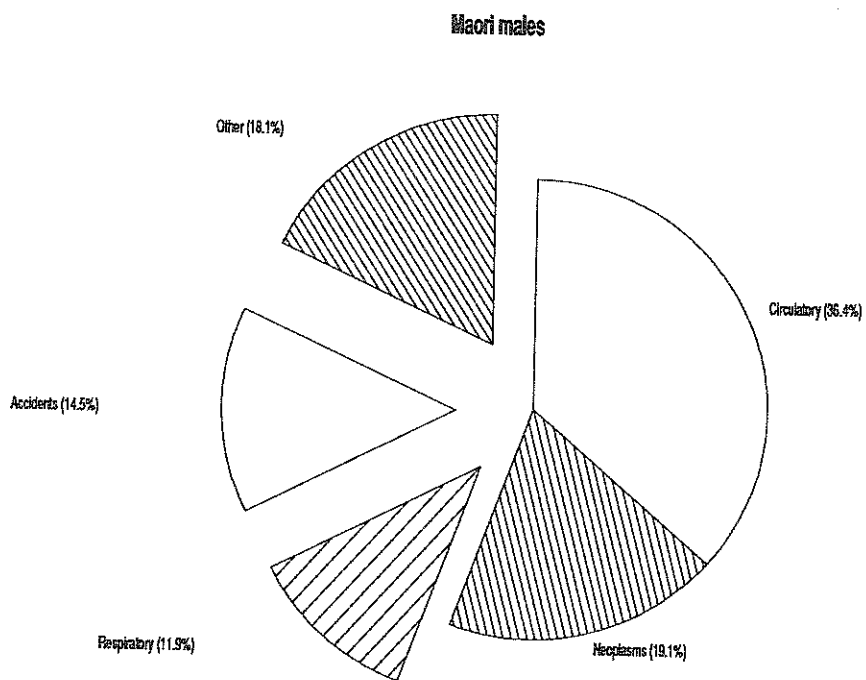
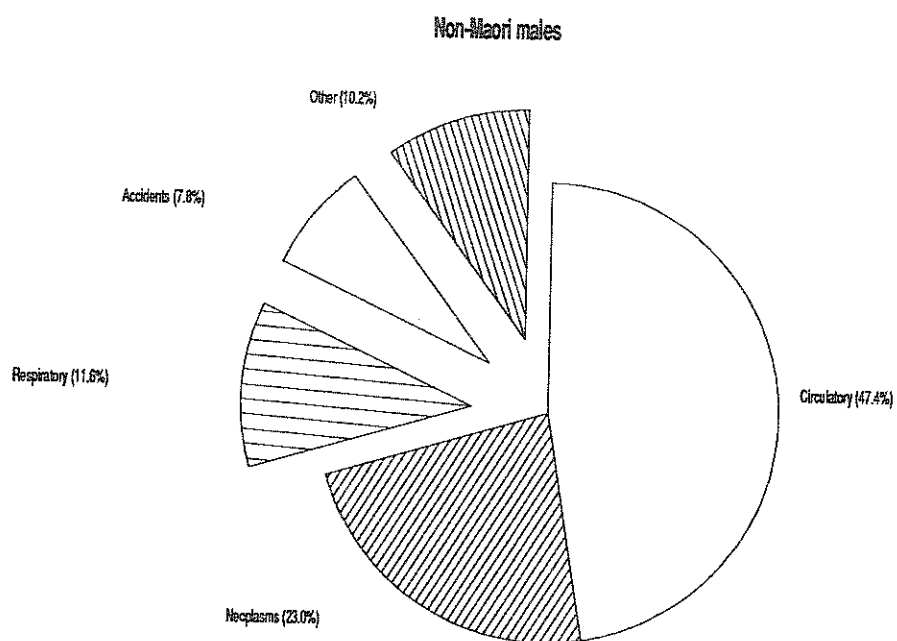


Figure 3 continued ...



(Breast cancer has been excluded from Table 3, since it is almost invariably confined to women. Consequently, ratios cannot be constructed.)

The mortality-sex ratios for ischaemic heart disease, lung cancer, chronic obstructive pulmonary disease, motor vehicle accidents, and suicide favour women — that is, women die from these causes at lower rates than men do. The mortality-sex ratios for cerebrovascular disease, pneumonia and influenza, and accidental falls favour men — that is, women die from these causes at higher rates than men do.

It is interesting to note that all four of the general categories show mortality-sex ratios which are favourable to women. In order to clarify the particular disease risks for women, it is therefore necessary to consider specific causes of death.

Summary

Women's life expectancy is greater than men's, and non-Maori women have a greater life expectancy than do Maori women. At birth, the average non-Maori woman can expect to live 76.95 years, and the average Maori woman can expect to live 68.49 years. The greatest gains in life expectancy have been experienced by Maori women.

Female mortality rates have declined over the past 15 years, particularly for Maori women. Infants and the elderly (65+) have benefited most from this reduction.

The leading general causes of death for women are circulatory system disease, neoplasms, respiratory system disease, and accidents. This pattern has persisted over the period 1968 to 1983. When specific causes of death are examined for the same period, increases in the rates of death due to lung cancer and chronic obstructive pulmonary disease are seen, as well as a decrease in the mortality rate for cerebrovascular disease.

TABLE 2: SPECIFIC CAUSES OF DEATH FOR FEMALES, 1968 - 1983

Specific Cause	1968	1973	1978	1983
Ischaemic Heart Disease	18.7	18.0	17.3	17.9
Cerebrovascular Disease	13.3	14.0	11.1	10.5
Breast Cancer	2.8	3.0	2.8	3.3
Colon Cancer	1.8	2.0	2.1	2.2
Lung Cancer	0.7	1.3	1.5	1.8
Pneumonia/Influenza	5.2	3.3	3.8	4.8
Chr.Obs.Pulmonary Disease	1.8	2.1	2.2	2.7
Motor Vehicle Accidents	1.1	1.6	1.3	1.1
Accidental Falls	1.6	2.1	1.0	0.9
Suicide	0.6	0.5	0.7	0.6

Source: Mortality and Demographic Data, 1968, 1973, 1978, 1983.

Note: Rates are per 10,000 population.

TABLE 3: MORTALITY-SEX RATIOS, 1983

GENERAL CAUSE OF DEATH Specific Cause of Death	Male Rate	Female Rate	Ratio
CIRCULATORY SYSTEM DISEASE	40.8	35.8	1.1
Ischaemic Heart Disease	26.5	17.9	1.5
Cerebrovascular Disease	7.7	10.5	0.7
NEOPLASMS	19.9	17.3	1.2
Lung Cancer	5.9	1.8	3.3
Colon Cancer	1.8	2.2	0.8
RESPIRATORY SYSTEM DISEASE	10.2	7.9	1.3
Pneumonia/Influenza	3.6	4.8	0.8
Chr.Obs Pulmonary Disease	6.1	2.7	2.3
EXTERNAL CAUSES			
Motor Vehicle Accidents	2.8	1.1	2.5
Accidental Falls	0.6	0.9	0.7
Suicide	1.6	0.6	2.7

Source: Mortality and Demographic Data, 1983.

Note: Rates are per 10,000 population.

MORBIDITY

Mortality measures are one way of assessing the status of women's health in New Zealand. Morbidity measures, which indicate the amount and kind of disease or illness in a population, are another important means of ascertaining health status. Depending on severity and chronicity, illness is likely to result in hospitalisation, hospital outpatient treatment, consultation with a general practitioner and/or specialist, consumption of pharmaceuticals, sick days, or limitations in daily living. Data are routinely collected for some of these measures of morbidity; for other measures, data range from scarce to nonexistent. In this part of the paper I will examine available data on hospitalisation, utilisation of general practitioner services, and incidence of disability.

Hospitalisation

More women are hospitalised annually than men. In 1983, the most recent year for which figures are available, there were 249,526 hospital discharges and deaths for women compared to 170,857 hospital discharges and deaths for men. These figures translate to rates of 1537.9 per 10,000 and 1065.8 per 10,000 for women and men respectively. (Note: Deaths in hospital form a small proportion of total discharges and deaths. Accordingly, they have not been treated separately. This means there is a small overlap between mortality and morbidity measures.)

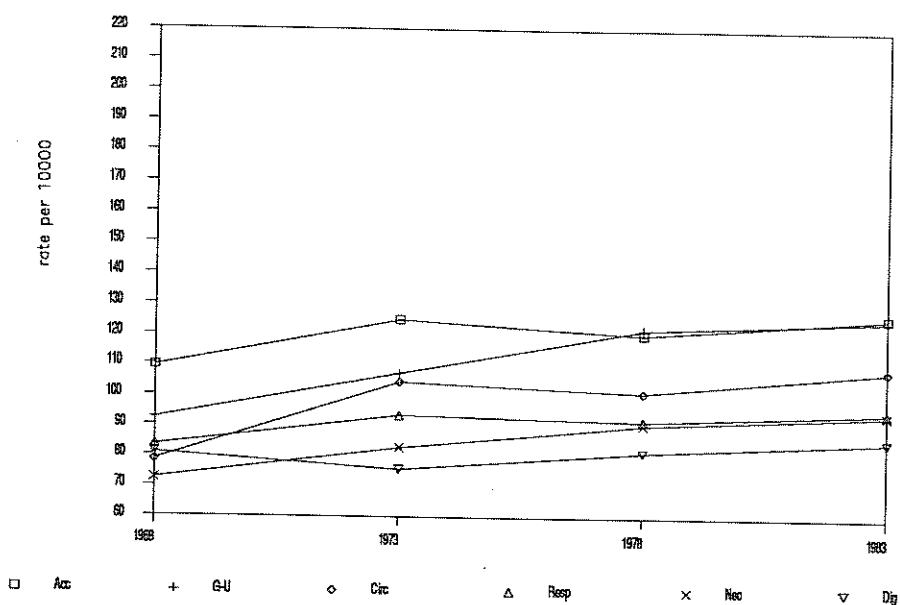
Much of this excess is due to obstetrics. If hospitalisation for obstetric causes is excluded, then the female rate drops to 1101.4 per 10,000, just slightly higher than the male rate. If a further exclusion of hospitalisation for genitourinary causes is made (for both sexes) then the female rate decreases further to 1006.4 per 10,000, which is slightly below the corresponding male rate. This parallels Nathanson's (1977) findings concerning hospital admissions in the United States and Canada.

Overall rates do not tell the whole story, however. By whatever criterion is used, female hospitalisation rates in the 15-44 age group are higher than male rates, whereas in all other age groups female hospitalisation rates are lower than male rates. Table 4 shows the male rate, the female rate, and the sex ratio as a function of age for all hospitalisations, hospitalisation excluding obstetrics, and hospitalisation excluding obstetrics and genitourinary causes.

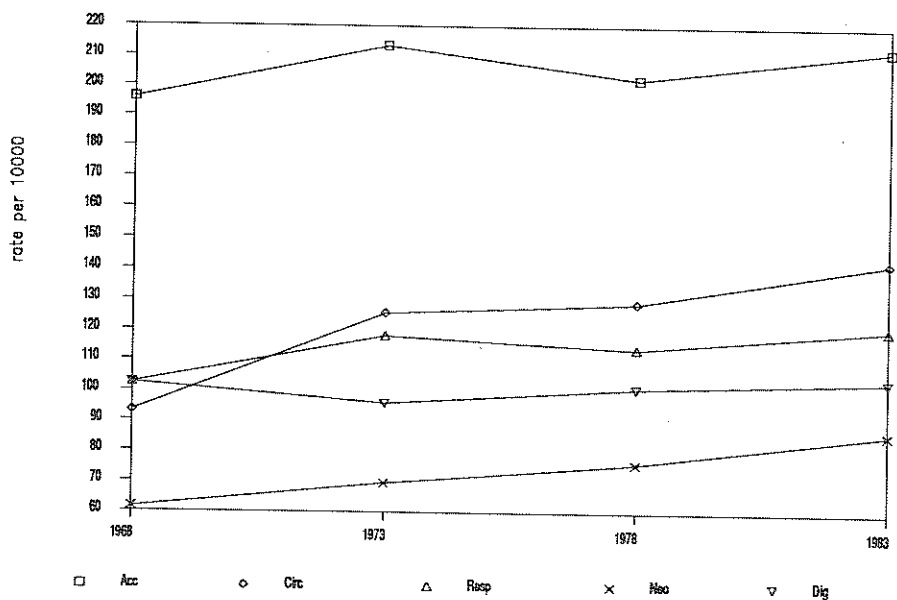
What are the leading causes of hospitalisation for women? Heading the list are external causes of injury and poisoning (accidents) and genitourinary system disease. These are followed by diseases of the circulatory system, diseases of the respiratory system, neoplasms, and diseases of the digestive system. Figure 4 shows that this ordering of causes is quite stable across the years 1973, 1978, and 1983.

Figure 4

Female hospital admissions 1968-83



Male hospital admissions 1968-83



Legend: Acc = Accident G-U = Genitourinary Circ = Circulatory Resp = Respiratory Neo = Neoplasms
Dig = Digestive

Similarly, the leading causes of hospitalisation for males show a stable pattern across the years 1973, 1978, and 1983. In these years the main reasons for hospitalisation were external causes, circulatory system disease, respiratory system disease, digestive system disease, neoplasms, and symptoms/signs/ill-defined conditions.

For both sexes circulatory system disease was a relatively less important reason for admission in 1968 than in subsequent years, and respiratory system disease and digestive system disease were more important reasons for admission.

TABLE 4: HOSPITAL DISCHARGES AND DEATHS, 1983

<i>All Causes</i>			
Age Group	Male Rate	Female Rate	Ratio
<1	4701.6	3777.6	1.2
1-14	775.8	574.2	1.4
15-44	683.1	1944.8	0.4
45-64	1227.6	1110.1	1.1
65+	2984.8	2245.4	1.3
All ages	1065.8	1537.9	0.7

All Causes Except Obstetrics

Age Group	Male Rate	Female Rate	Ratio
<1	4701.6	3777.6	1.2
1-14	775.8	571.3	1.4
15-44	683.1	992.2	0.7
45-64	1227.6	1108.4	1.1
65+	2984.8	2245.4	1.3
All ages	1065.8	1101.4	1.0

All Causes Except Obstetrics and Genitourinary System Disease

Age Group	Male Rate	Female Rate	Ratio
<1	4664.7	3776.8	1.2
1-14	753.1	568.4	1.3
15-44	672.7	845.9	0.8
45-64	1201.6	988.6	1.2
65+	2861.6	2192.8	1.3
All ages	1039.5	1006.4	1.0

Source: Hospital and Selected Morbidity Data, 1983.

Note: Rates are per 10,000 population.

Although the leading reasons for hospitalisation are similar for men and women — with the important exception of genitourinary system disease — the rates at which the two sexes are hospitalised for these causes vary.

Tables 5A through 5F give the sex specific rates and the male:female ratios as a function of age for the leading causes of hospitalisation in 1983.

The overall morbidity-sex ratios for each of the main categories show that men are hospitalised at higher rates than women for accidents (1.7), circulatory system disease (1.3), respiratory system disease (1.3), and digestive system disease (1.2). Women are hospitalised at higher rates than men for genitourinary system disease (0.4) and for neoplasms (0.9).

TABLE 5: SEX-SPECIFIC RATES AND MALE:FEMALE RATIOS FOR LEADING CAUSES OF HOSPITALISATION, 1983

A: External Causes of Injury and Poisoning

Age Group	Male Rate	Female Rate	Ratio
<1	102.7	81.1	1.3
1-14	185.8	117.5	1.6
15-44	271.5	108.2	2.5
45-64	121.5	82.6	1.5
65+	179.1	272.1	0.7
All Ages	212.4	126.1	1.7

B: Circulatory System Disease

Age Group	Male Rate	Female Rate	Ratio
<1	9.7	3.4	2.9
1-14	4.6	3.1	1.5
15-44	35.9	35.5	1.0
45-64	322.1	166.2	1.9
65+	769.2	533.3	1.4
All Ages	142.3	108.5	1.3

C: Respiratory System Disease

Age Group	Male Rate	Female Rate	Ratio
<1	753.5	500.8	1.5
1-14	193.6	132.5	1.5
15-44	47.7	58.4	0.8
45-64	78.6	68.2	1.2
65+	278.9	134.5	2.1
All Ages	120.5	94.9	1.3

D: Neoplasms

Age Group	Male Rate	Female Rate	Ratio
<1	14.3	17.7	0.8
1-14	13.5	10.6	1.3
15-44	25.0	59.0	0.4
45-64	161.8	182.7	0.9
65+	485.7	273.8	1.8
All Ages	86.1	94.2	0.9

E: Digestive System Disease

Age Group	Male Rate	Female Rate	Ratio
<1	331.4	116.6	2.8
1-14	55.2	40.2	1.4
15-44	71.9	69.3	1.0
45-64	144.3	103.3	1.4
65+	286.3	202.5	1.4
All Ages	103.4	85.3	1.2

F: Genitourinary System Disease

Age Group	Male Rate	Female Rate	Ratio
<1	66.7	26.8	2.5
1-14	32.6	14.9	2.2
15-44	24.0	179.0	0.1
45-64	61.5	157.8	0.4
65+	203.4	96.0	2.1
All Ages	48.9	125.2	0.4

Source: Hospital and Selected Morbidity Data, 1983.
Note: Rates are per 10,000 population.

Overall ratios can mask differences by age, and inspection of Tables 5A to 5F reveals some interesting exceptions to the general trends. Although at most ages men are hospitalised much more frequently due to accidents than are women, this relationship reverses among the elderly (65+). Similarly, the rate of women's hospitalisation for respiratory system disease exceeds that of men in the 15-44 age group, but not at other ages.

The two disease groupings for which women show a generally higher rate of hospitalisation, neoplasms and genitourinary system disease, also show variations with age. Elderly males are hospitalised for cancer at substantially higher rates than elderly females. The rates of hospitalisation for genitourinary system disease show marked reversals for the young (under 15) and the elderly (65+), with rates for males at least double those for women.

Obstetric and Gynaecological Surgery

Since obstetrics and gynaecology — the latter encompassed by the genitourinary system disease category — represent such a substantial component of women's hospital experience, and since surgical intervention is a frequent occurrence during hospitalisation, it seems pertinent to examine surgery in these two areas.

Data on operations performed in both public and private hospitals have been collected since 1979. Table 6 shows, for public and private hospitals combined, the number of operations performed upon females, the number

of obstetric operations, and the number of gynaecological operations for each year from 1979 to 1984. Also shown are the rates per 10,000 women aged 15 to 44 for obstetric operations and the rates per 10,000 women aged 15 and over for gynaecological operations.

The rate of gynaecological operations has shown little change since 1979. The increased rate of obstetric operations reflects the change in data collection which occurred in the middle of 1981, when returns were furnished by all maternity hospitals as well as general hospitals.

TABLE 6: OBSTETRIC AND GYNAECOLOGICAL SURGERY, 1979 - 1984

Year	Fem.Ops. Total	Obs.Ops. Total	Obs.Ops. Rate	Gyn.Ops. Total	Gyn.Ops. Rate
1979	134693	4771	69.6	39991	350.5
1980	137333	5936	85.4	40434	350.8
1981	149125	14019	198.2	41178	350.5
1982	157662	21362	295.9	41362	346.3
1983	159404	21305	287.5	41347	339.2
1984	161934	22161	293.3	40831	329.3

Sources: Hospital and Selected Morbidity Data, 1979, 1980, 1981, 1982, 1983, and 1984.

Note: Figures include both public and private hospitals. From 1 July 1981, figures include all maternity hospitals as well as general hospitals. Abbreviations are as follows: Fem.= Female, Ops.= Operations, Obs.= Obstetric, Gyn.= Gynaecological. The totals and rates for obstetric operations are based on women aged 15 to 44. The totals and rates for gynaecological operations are based upon women aged 15 and over. In each case, rates are per 10,000 women of the relevant ages.

The most commonly performed gynaecological operations, in descending order, are dilation and curettage of the uterus, total abdominal hysterectomy, vaginal hysterectomy, and bilateral endoscopic occlusion or destruction of the Fallopian tubes (tubal ligation). For every year from 1979 to 1984, dilation and curettage operations comprise nearly 50% of all gynaecological surgery.

The most commonly performed obstetric operations are cervical caesarean section, low forceps delivery both with and without episiotomy, artificial rupture of the membranes, and vacuum aspiration for termination of pregnancy (abortion). In 1984, for example, 9.8% of live births were "accompanied" by caesarean section, and a further 9.8% by low forceps delivery.

Other Measures of Morbidity

Analysis of women's health status in terms of mortality and morbidity sufficiently severe to result in hospitalisation is fairly straightforward, since data for these indices are routinely collected and published annually. An assessment of health status, however, requires more than a consideration of death and serious illness. Consideration needs to be given to "everyday" health, resulting in (for example) general practitioner visits, consumption of pharmaceuticals, disability days, and so forth.

Measurement of this sort of mild or moderate morbidity is difficult, because relevant data are not routinely collected on a national basis. (This type of data is collected overseas, via the Health Interview Survey in the United States and the General Household Survey in Great Britain.) Some information can be gleaned, however, from a small number of local/regional studies of general practitioner visits and disability incidence that have been carried out. This section will summarize the main findings of those studies.

General Practitioner Visits

Two investigations of this topic have been carried out by the Royal New Zealand College of General Practitioners in recent years. The CoMedCa study was carried out in the Hamilton Health District for one year from February 1979. A total of 115 doctors participated in the study; they furnished 9468 patient records, based on a 1 in 6 sample of all patients seen during one week in each quarter of the year. The PriMedCa study was conducted in Christchurch from June 1980 through May 1981. Fifty general practitioners produced 4629 patient records, based on a 1 in 3 sample of the first 75 patients seen during one week per quarter. From the considerable quantity of data obtained in the two studies, several points concerning women's health can be made.

Women were over-represented in general practitioner visits. In the CoMedCa study 57.3% of visits were made by females, although females constituted only 49.4% of the relevant population. The PriMedCa study found that 59% of general practitioner visits were made by women, although 51.2% of the relevant population were female. (In neither study, however, was this difference significant by chi-square test.)

Both studies found that the higher rates of female consultation varied according to age. The CoMedCa study found that women in the 15 to 40 age group had a higher than average rate of consultation, and that both married and formerly married women visited general practitioners at greater rates than their proportion in the general population. The PriMedCa study found that female consultation rates were particularly high in the 15-40 and 65+ age groups, and that obstetrics and gynaecology alone did not account for the imbalance between the sexes. Conditions

showing an imbalance towards women included psychological conditions, general symptoms, and musculoskeletal conditions, as well as the expected ones of antenatal care, family planning, and genitourinary conditions. Injuries was the only category in which males were over-represented.

The PriMedCa study found that 79.9% of visits were for symptom or disease reasons, and 70.4% of diagnoses were of symptoms and diseases. Patients tended to present with symptoms and be diagnosed with diseases. There was a fairly close correspondence between reason for visit and diagnosis for all but psychological conditions; these comprised 2.8% of the reasons for visit but 7.6% of the diagnoses.

The CoMedCa study gave detailed breakdowns of diagnoses by age, sex, and race. There were differences in diagnostic patterns as functions of all three variables. Female infants and children visited the doctor for reasons associated with acute illness, females in the 15-24 and 25-34 age groups visited the doctor for reproductive reasons, and females over the age of 35 (and particularly over the age of 50) visited the doctor for reasons associated with chronic disease. Maori women were more frequently diagnosed with endocrine/metabolic conditions than were non-Maori women. On the other hand, non-Maori women were more frequently diagnosed with psychological conditions than were Maori women.

The similarity between the results of the two investigations — and this extends beyond the findings reported here — suggests that the pattern reported is common to at least the major urban areas of New Zealand.

Disability

The Wellington Hospital Board area was surveyed in 1978 to establish the prevalence, severity, and type of physical disability in the region. Disability was defined as loss or reduction of functional ability and/or activity, resulting from an adverse physical condition, and included both impairment (some loss) and handicap (substantial loss). The level of disability was assessed according to chronicity, self-care scale score, dependence on walking aids, inability to work or attend school, and extent of sensory difficulties.

The leading cause of disability was diseases of the nervous system and sense organs, with deafness and eye conditions as the main contributing conditions. Musculoskeletal system disease was the second major cause of disability, with arthritis the principle problem. Circulatory system disease was the third major cause of disability and accidental injury was the fourth.

The overall disability prevalence rate was 87.3 per 1000. Age and sex-specific rates showed considerable variation. (All rates given in the

remainder of this paragraph are per 1000.) The disability rate for both sexes increased with age, and the overall rate was higher for females (96.6) than for males (77.9). Rates of impairment, both sensory and other, were similar for females (42.3) and for males (42.0), but rates of handicap were higher for females (54.3) than for males (35.9). Rates increased over the age of 65 (303.4), and particularly over the age of 75 (646.3). The authors noted that the combined "disadvantage" of age and sex meant that two-thirds of the disabled elderly were female (Jack, Dowland, Dourado, and Hyslop, 1981).

Before leaving the topic of women's morbidity, mention should be made of the Social Indicators Survey undertaken by the Department of Statistics in 1980-81. Current health status, functional disability, satisfaction with health, access to medical care, and medical insurance coverage were briefly considered. However, responses were separated by sex only in the latter two areas.

Men had somewhat better access to medical care than did women. Of the men, 87% had a vehicle available for use, 9% had no vehicle but had a medical centre within 15 minutes' walk, and only 3% had neither a vehicle nor a centre within convenient walking distance. The corresponding figures for women were 67%, 23%, and 9%. Given that women make more visits than do men, this imbalance in access affects them disproportionately.

More men than women were covered by medical insurance. Rates were highest for both sexes in the 35-44 and 45-54 age groups, and the sex difference was largest in these age groups. Overall, 38% of men and 31% of women had medical insurance coverage.

Summary

From this review of morbidity statistics several important conclusions concerning women's health status can be drawn.

Women have a different hospitalisation pattern than do men. During the reproductively active phase of the lifespan (ages 15 to 44) women are hospitalised at a higher rate than men. Obstetrics and gynaecology account for most (but not all) of this "excess" hospitalisation. Outside these years, women show lower rates of hospitalisation than do men. The two most important reasons for women's hospitalisation are genitourinary system disease and accidents.

Women make more visits to general practitioners than men do. As with hospitalisation, the imbalance between the sexes in consultation rates is particularly marked in the reproductively active period of life. Women over 65 also use general practitioner services at a higher than average rate. This

over-representation of women is due in part to "women-specific" conditions such as antenatal care, family planning, and genitourinary system disease, but women also present in disproportionate numbers with psychological conditions, general symptoms, and musculoskeletal conditions.

It can be seen that women are greater consumers of health services than are men. Much of this consumption arises from women's need for obstetric and gynaecological "treatment". A substantial proportion of this treatment, of course, is directed at women who are well but who are either pregnant or contracepting. There is a need, then, to explore women's perceptions of the health care they receive.

Finally, it should be reiterated that there is a scarcity of data concerning morbidity, particularly morbidity of a mild or moderate degree which does not require hospitalisation. National collection (and publication) of data regarding general practitioner and specialist consultations would be advantageous. So, too, would regular assessment of current health status — something like a Health Indicators Survey, repeated at regular intervals. Consideration could also be given to developing positive indicators of wellness, rather than negative indicators of sickness.

MENTAL HEALTH

In this section the national mental health statistics will be reviewed. These encompass both first admissions and readmissions to psychiatric institutions. The term "psychiatric institutions" refers to psychiatric hospitals, psychiatric units of public hospitals, and Alcohol and Drug Addiction (A & DA) institutions. Before beginning this discussion, it should be noted that admission to a psychiatric institution usually indicates a fairly severe degree of mental ill-health. Measures of mild or moderate mental health problems, requiring perhaps psychiatric outpatient treatment or other forms of counselling, are not available in New Zealand.

First Admissions

The rates (per 100,000 mean population) of first admission have declined for both sexes since 1968, and the decrease has been slightly greater for women than for men. For women, the overall rate has dropped from 183.6 in 1968 to 132.1 in 1983. For men, the overall rate has dropped from 171.7 in 1968 to 150.0 in 1983. Thus in 1968 the first admission rate was higher for women than for men, whereas by 1983 the reverse was true. This is mirrored by the reversal in the overall sex ratio, which was 0.9 in 1968 and 1.1 in 1983. Table 7 summarises these data.

TABLE 7: FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS

	1968	1973	1978	1983
Male Rate	171.7	167.7	149.7	150.0
Female Rate	183.6	183.4	143.8	132.1
Male:Female Ratio	0.9	0.9	1.0	1.1

Sources: Mental Health Data, 1968, 1973, 1978, and 1983.

Note: Rates are per 100,000 population.

Turning now to the reasons for first admission, the two sexes show different patterns of diagnosis, and both sexes show changes in the distributions of diagnoses over the 1968 - 1983 period. Figure 5 shows the rates of first admission for the five leading diagnostic categories by sex and by year.

Several important points emerge from a consideration of Figure 5. For women, the leading cause of first admission has been and remains neurotic depression (formerly termed depressive neurosis). For men, the foremost cause of first admission is alcohol dependence or abuse (formerly

Figure 5

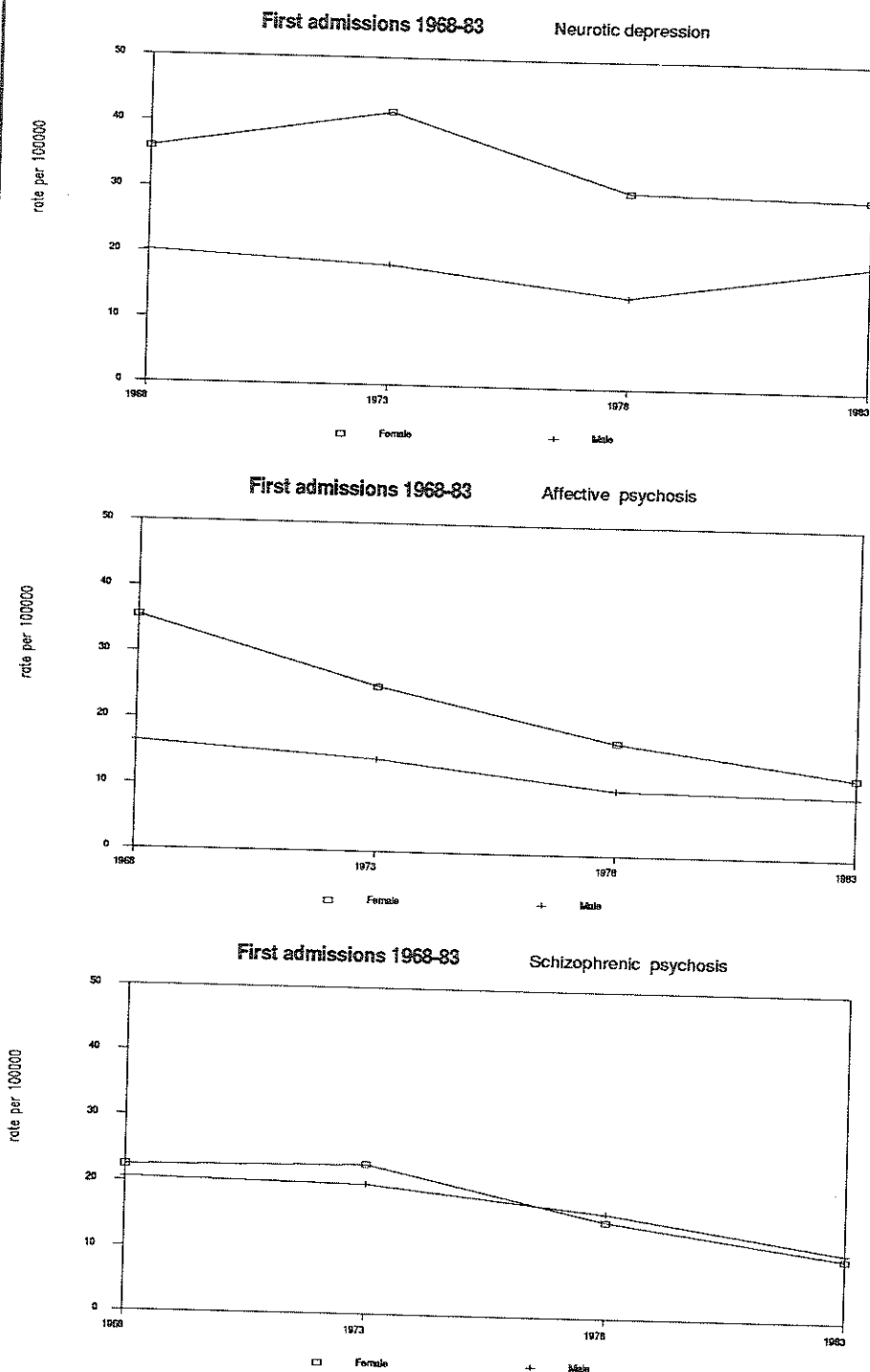
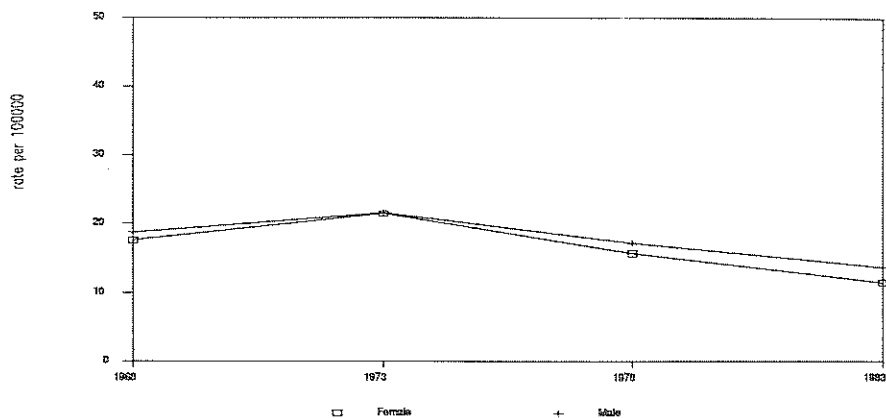


Figure 5 continued

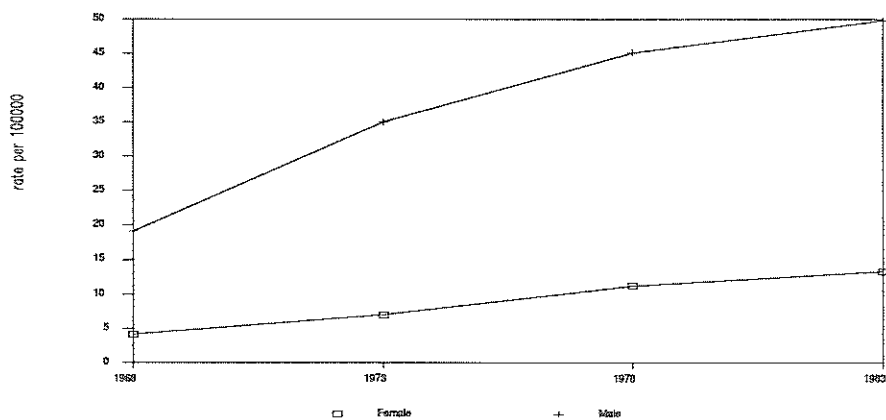
First admissions 1968-83

Personality disorder



First admissions 1968-83

Alcohol dependence/abuse



termed alcoholism), and this has been so since 1973, when admissions to A & DA institutions were included in the mental health data.

The diagnoses of neurotic depression and affective psychosis (formerly termed depressive psychosis) are applied more often to women than to men, although the gaps between the sexes are narrowing. The rates of first admission for neurotic depression do not show a consistent trend for either sex, but both sexes show a decline in rates of first admission for affective psychosis. The decline is particularly marked for women: the rate has decreased from 35.5 in 1968 to 12.2 in 1983.

The diagnoses of schizophrenic psychosis and personality disorder are applied to women and men at approximately equal rates. The rates for schizophrenic psychosis show a gradual decrease over time. The rates for personality disorder show a gradual increase from 1968 to 1978, and then a marked drop in 1983.

The diagnosis of alcohol dependence or abuse is applied much more often to men than to women. Both sexes show increasing rates: the rate for women has increased from 4.1 in 1968 to 13.3 in 1983, and the rate for men has increased from 19.1 in 1968 to 49.8 in 1983. Although the rates for men are much higher than those for women, the rate of increase has been greater for women than for men.

Two additional diagnostic categories were important in 1983 first admissions. The category of stress and adjustment reactions, a diagnosis new with the ninth revision of the ICD in 1980, was the third major cause of first admissions for women and the sixth major cause for men. The diagnostic category of senile and presenile psychotic conditions was the fourth leading cause of first admissions for both women and men in 1983.

In general it may be said that patterns of diagnosis have converged for the two sexes since 1968, so that the two most common diagnoses — of neurotic depression and alcohol dependence or abuse — are the same for the two sexes, although the ordering differs. Since there has been considerable awareness of and debate concerning sex-linked bias in psychiatric diagnosis, this trend can be seen as encouraging.

Marital Status and First Admissions

First admissions are differently distributed by marital status for men and women. Table 8 gives the numbers and percentages of admissions for each status, and the corresponding percentages for the total population for the years 1968 and 1983. Married females and single males are admitted in greater numbers than their counterparts of other statuses. For both sexes the proportion of single people has remained static from 1968 to 1983, the proportion of married people has decreased, and the proportion of formerly married people has increased. This accords with the altered distributions

of these marital statuses in the general population over this period. Although married women and single men are admitted in greater numbers, Table 8 also indicates that for both sexes married people are under-represented in admissions relative to their proportions in the population, and for both sexes never married and formerly married people are over-represented in admissions relative to their proportions in the population. For both sexes and both years, chi-square tests show the disproportion to be significant at the .001 level.

TABLE 8: MARITAL STATUS AND FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS

Females, 1968

Marital Status	Number of Admissions	Percentage of Admissions	Percentage of Population
Single	786	31.1	20.7
Married/de facto	1255	49.6	66.1
Formerly married	483	19.1	13.1
Unknown	5	0.2	0.1

Males, 1968

Marital Status	Number of Admissions	Percentage of Admissions	Percentage of Population
Single	1092	46.1	28.1
Married/de facto	967	40.8	66.7
Formerly married	297	12.5	5.0
Unknown	12	0.5	0.2

Females, 1983

Marital Status	Number of Admissions	Percentage of Admissions	Percentage of Population
Single	684	31.9	22.5
Married/de facto	856	39.9	59.0
Formerly married	570	26.6	16.6
Unknown	33	1.5	1.9

Males, 1983

Marital Status	Number of Admissions	Percentage of Admissions	Percentage of Population
Single	1151	47.9	29.5
Married/de facto	805	33.5	60.7
Formerly married	399	16.6	7.8
Unknown	50	2.1	2.0

Sources: Mental Health Data, 1968 and 1983. New Zealand Official Yearbook, 1968 and 1983.

Readmissions

The overall rates of readmission (per 100,000 mean population) have increased since 1968 for both men and women, and the increase has been slightly greater for men than for women. For women, the overall rate of readmission has increased from 248.1 in 1968 to 301.1 in 1983. For men, the overall rate of readmission has increased from 247.2 in 1968 to 349.5 in 1983. Thus in 1968 the readmission rates were equal for men and for women, whereas by 1983 the readmission rate was higher for men than for women. The overall sex ratios reflect these changes: the ratio was 1.0 in 1968, and 1.2 in 1983. Table 9 summarises these data.

TABLE 9: READMISSIONS TO PSYCHIATRIC INSTITUTIONS

	1968	1973	1978	1983
Male Rate	247.2	318.7	312.4	349.5
Female Rate	248.1	294.3	272.2	301.1
Male:Female Ratio	1.0	1.1	1.2	1.2

Sources: Mental Health Data, 1968, 1973, 1978, and 1983.

Note: Rates are per 100,000 population.

A consideration of the reasons for readmission reveals somewhat different patterns of diagnosis for women and men, and considerable stability of these patterns over time. Figure 6 shows the rates of readmission for the seven leading readmission diagnoses for the relevant time period.

It can be seen from Figure 6 that readmissions reflect both severity, with the psychoses heavily represented for both sexes, and prevalence, with alcohol dependence or abuse figuring strongly in male readmissions and neurotic depression and affective psychosis forming a large component of female readmissions. Diagnosis upon readmission, of course, is strongly positively correlated with diagnosis upon first admission.

The diagnoses of affective psychosis and neurotic depression are more often applied to women than to men, paralleling the first admission data, and the difference in rates between the sexes has remained fairly constant. (Note: The large increase for both sexes in 1983 for affective psychosis reflects a definitional change consequent upon the use of the 1980 revision of the ICD. There is a concomitant decrease for both sexes in 1983 for functional psychosis.)

The diagnosis of schizophrenic psychosis, which is a major component of readmissions for both sexes, is now more frequently applied to men than to women, reversing the earlier situation.

Figure 6

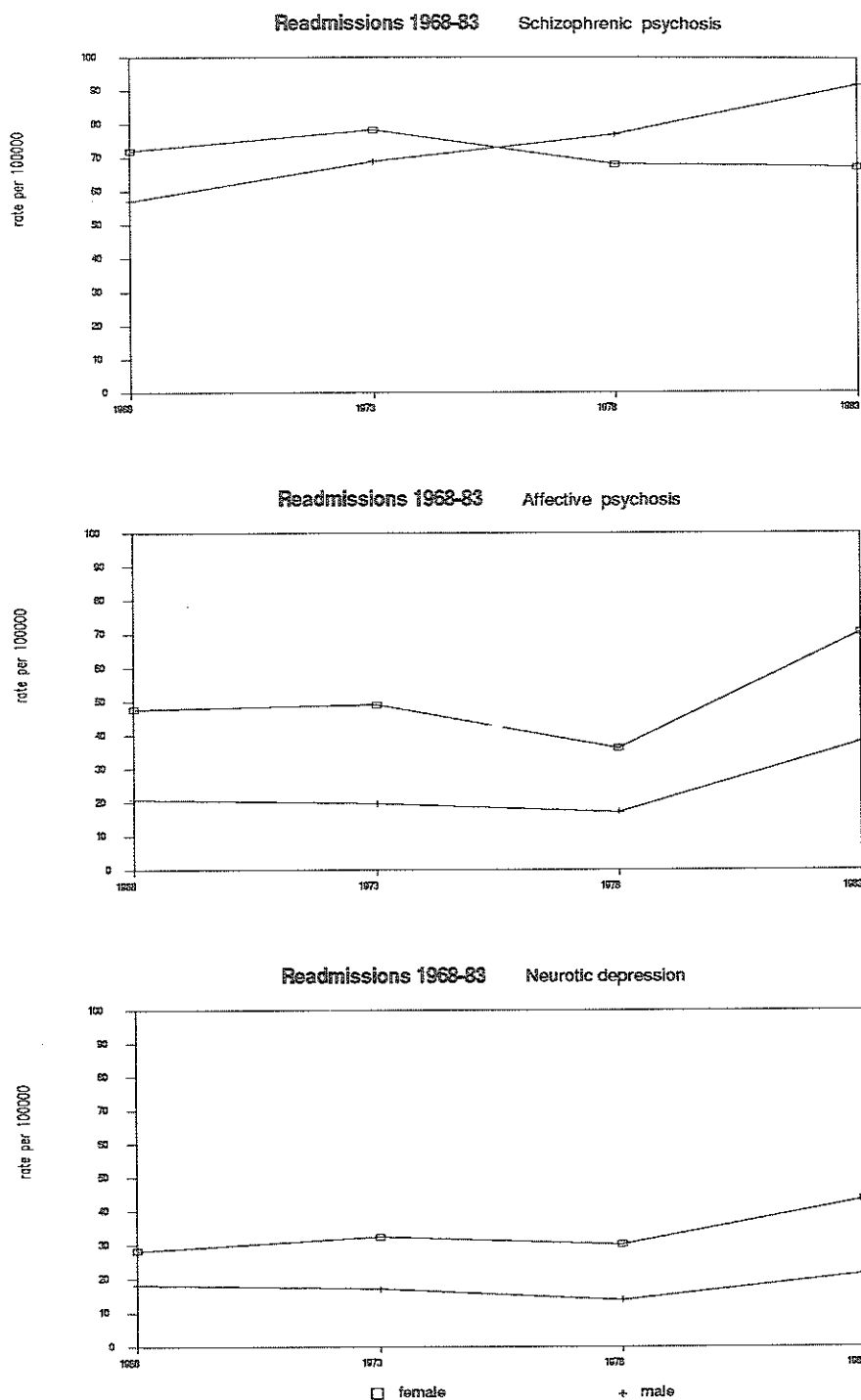


Figure 6 continued ...

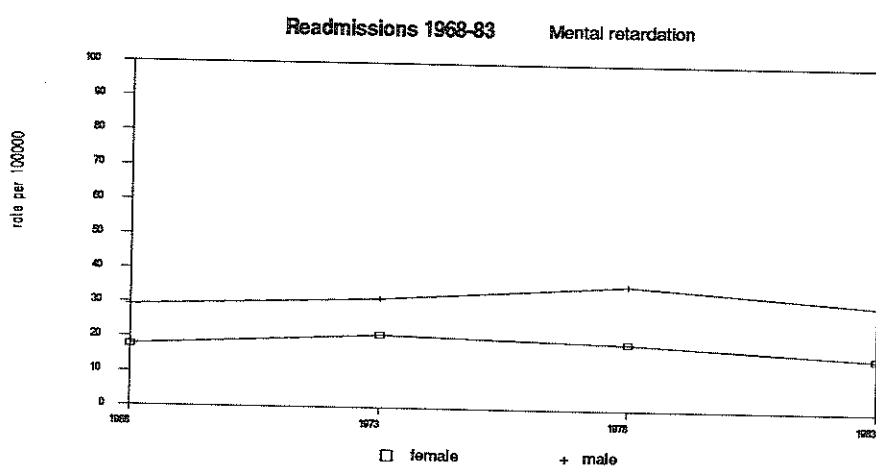
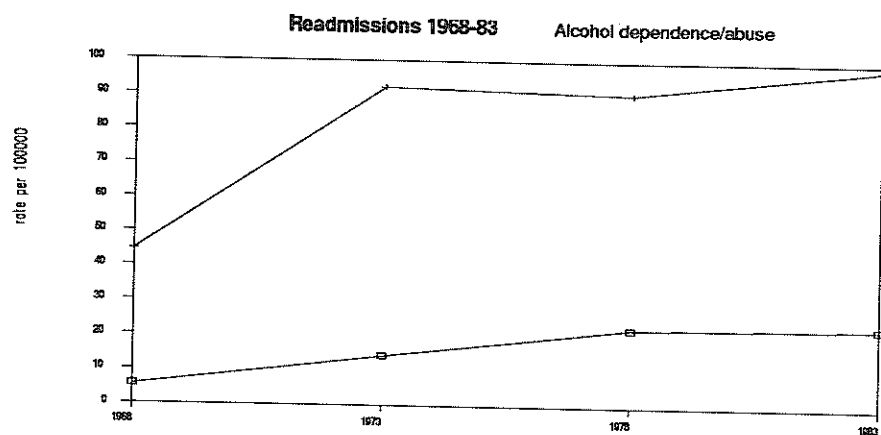
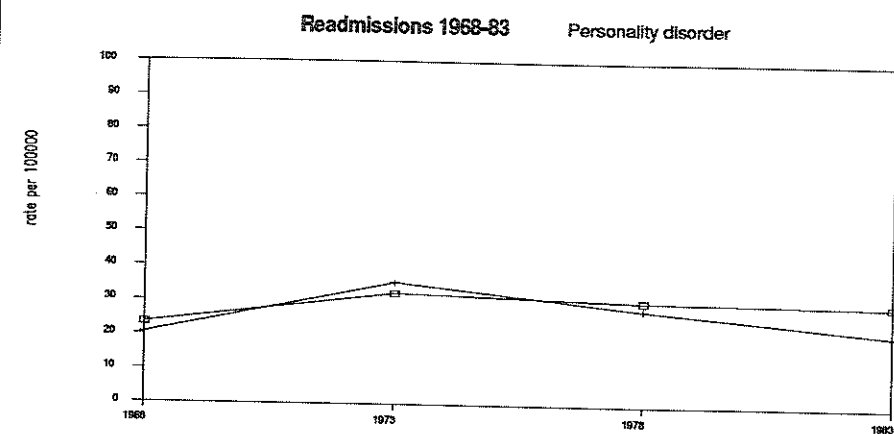
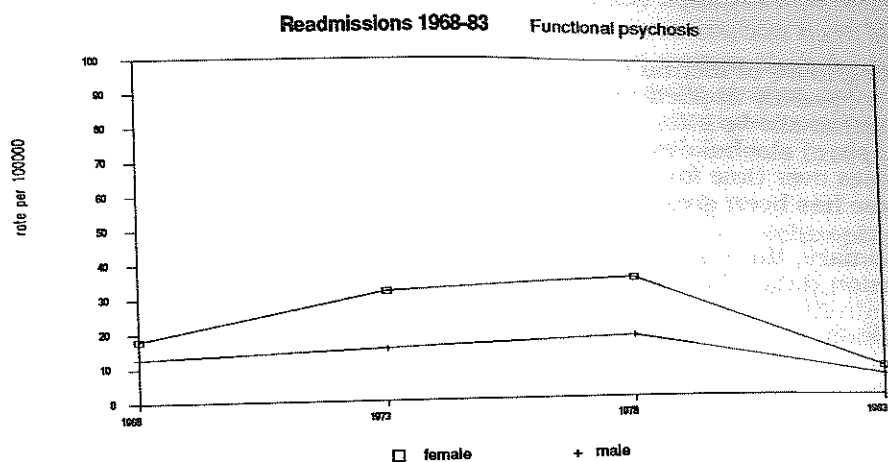


Figure 6 continued . . .



The diagnosis of personality disorder is applied to the two sexes at approximately equal rates, and few changes are shown over the past 15 years.

The diagnoses of mental retardation and alcohol dependence or abuse are more frequently applied to men than to women. The diagnosis of mental retardation shows little change in rate for either sex over time. The diagnosis of alcohol dependence or abuse, on the other hand, shows large increases over time for both women and men. Furthermore, the rate of increase has been greater for women than for men.

In summary, the readmission data show strong parallels with the first admission data. The imbalances in initial diagnosis prevail, so that women are readmitted with diagnoses of affective psychosis and neurotic depression, and men are readmitted with a diagnosis of alcohol dependence or abuse. The diagnoses which show fairly equal rates in first admissions — schizophrenic psychosis and personality disorder — also show very similar rates in readmissions. There is little evidence yet of any convergence between the sexes in readmission diagnoses, as was seen in first admission diagnoses. Since readmission diagnoses may reflect initial diagnoses made many years earlier, it may be too soon to look for convergence in readmission diagnoses.

Maori Women and Mental Health

A comparison of Maori and non-Maori women's mental health is difficult, because of the small number of Maori women admitted to psychiatric institutions. Small fluctuations in these numbers can produce substantial changes in rates. Table 10 gives rates of first admission and readmission for the relevant years for Maori and non-Maori women. In general, overall rates of first admission have been approximately equal for Maori women and for non-Maori women. Maori rates have not, however, shown the steady decline that non-Maori rates have. Overall rates of readmission have risen for both ethnic groups, but particularly so for Maori women.

TABLE 10: RATES OF FIRST ADMISSION AND READMISSION TO PSYCHIATRIC INSTITUTIONS FOR MAORI AND NON-MAORI WOMEN

	1968	1973	1978	1983
<i>First Admissions</i>				
Maori	161.7	194.5	138.6	155.2
Non-Maori	185.5	182.4	144.3	129.8
<i>Readmissions</i>				
Maori	206.8	310.5	328.1	402.1
Non-Maori	251.6	292.8	266.8	291.4

Sources: Mental Health Data, 1968, 1973, 1978, and 1983.

Note: Rates are per 100,000 population. Non-Maori rates were derived by subtracting the Maori figures from those for the total population.

The leading cause of first admission for Maori women is and has been neurotic depression, and the rates are approximately equal for the two ethnic groups. Schizophrenic psychosis and mental retardation have been more important reasons for first admission for Maori women than for non-Maori women. By 1983 the two ethnic groups show quite similar patterns of diagnosis, with both stress and adjustment reactions and alcohol dependence or abuse being important factors in Maori women's first admissions.

The two major reasons for readmission for Maori women are schizophrenic psychosis and affective psychosis. The rate of readmission for schizophrenic psychosis is markedly higher for Maori women than for non-Maori women, and the rate of readmission for mental retardation is also greater among Maori women. Conversely, the rate of readmission for neurotic depression is lower for Maori women than for non-Maori women. These differences in diagnosis as a function of ethnicity suggest a need for further research.

Summary

Women in 1983 were admitted to psychiatric institutions at a rate of 132.1 per 100,000 and readmitted at a rate of 301.1 per 100,000. The major reason for first admission was neurotic depression, followed by alcohol dependence or abuse in second place and stress and adjustment reactions in third place. The major reasons for readmission were affective psychosis and schizophrenic psychosis.

The most salient changes in women's psychiatric admissions over the past 15 years have been: (1) a decrease in the rate of first admission for affective psychosis, (2) an increase in the rate of first admission for alcohol dependence or abuse, and (3) an increased rate of readmission for alcohol dependence or abuse.

Married women are admitted in numerically greater numbers than are never married or formerly married women, but in proportionately fewer numbers than non-married women.

Maori women in 1983 were admitted at a somewhat greater rate than non-Maori women, and were readmitted at a substantially higher rate. The leading causes of first admission and readmission are similar for the two ethnic groups, although there are some substantial differences in the rates.

SUMMARY AND CONCLUSIONS

The health statistics reviewed in the preceding sections present a pattern which is common to industrialised countries. Mortality indices such as life expectancy, mortality rates, and mortality-sex ratios for general causes of death show an advantage for women. Conversely, morbidity indices such as rates of hospitalisation, frequency of general practitioner visits, and incidence of disability show a disadvantage for women. As Rice and Cugliani (1980, p21) expressed it:

Conditions that impact on morbidity apparently are not very important in mortality. Acute conditions among women result in illness, disability, and use of health services, but they are seldom causes of death.

The mortality and morbidity data have not shown substantial changes in overall patterns, or in sex differentials, during the last fifteen years. This is not particularly surprising, as major changes would not generally be expected within this length of time. Moreover, the aim of this paper was to obtain an overview of the contemporary state of women's health, rather than identify long-term trends.

The review has indicated some areas of particular relevance to women's health. Several issues arise from a consideration of the mortality data. The advantage women hold in life expectancy has important social, psychological, and economic consequences. The elderly population is increasingly comprised of women, many of whom live alone. Many elderly women are also disabled by chronic disease. Living longer is not necessarily desirable, if that longevity is characterised by a decreased quality of life.

When specific causes of death are considered, two important points emerge. First, women's mortality rates for lung cancer and for chronic obstructive pulmonary disease have risen. Both diseases have strong links to smoking, and the observed increases undoubtedly reflect the increased prevalence of smoking by women since 1945. Furthermore, these increased mortality rates have occurred in the context of an overall decrease in mortality rates, and thus are especially noteworthy.

Second, women's advantage — as indicated by mortality-sex ratios — is not uniform across all causes of death. In particular, women show a disadvantage with respect to cerebrovascular disease, cancer of the colon, and accidental falls. These are areas where it may be fruitful to focus further research.

The most obvious issue arising from the review of morbidity data is the role played by obstetrics and gynaecology in women's utilisation of health

care services. Much of women's hospitalisation and surgery is related to their reproductive system. Hospital discharge rates for genitourinary system disease are (sometimes) exceeded only by discharge rates for accidents, and obstetric and gynaecological surgery represents nearly 40 per cent of the total surgery performed on women. Similarly, general practitioner consultations show an imbalance between the sexes — weighted towards women — during the reproductive life span. The existing health care services, with their emphasis on illness and treatment, may not be appropriately structured to meet the needs of women for obstetric and gynaecological health care.

In the domain of mental health some changes are apparent in first admissions to psychiatric institutions, where there seems to have been a convergence in the distributions of diagnoses for women and men. Nevertheless, women are still disproportionately diagnosed as suffering from neurotic depression at the time of first admission. The "traditional" psychiatric diagnoses of affective psychosis and schizophrenic psychosis are decreasing in frequency, while the more "modern" diagnoses of stress and adjustment reactions and alcohol dependence or abuse are increasing in frequency. These changes may be less a reflection of changes in the mental health of women or men *per se* than of changes in the diagnostic behaviour of psychiatric clinicians and/or changes in admissions policy.

This paper has documented the current status of women's health, according to a variety of traditional epidemiological measures. The importance of such an endeavour is well stated by Maclean (1985, p666):

Concern is not enough. We need and should demand sound information on the conditions from which women suffer and die and on the ages and stages at which women are at risk to a variety of documented or suspected health hazards. Reliable information is also necessary if we are to assess the efficacy and appropriateness of the provisions which different health services presently make or plan to make for women's special health needs. If we are to make any progress with effective policy changes among health planners and existing medical providers, or if we are to enhance and improve our own position and roles as carers, we must be able to substantiate our arguments with sufficient and convincing data.

In closing, I would like to return briefly to the question of interpretation. What is the meaning of observed differences in health status measures between women and men? It is not enough, as Gordis (1984) observed, merely to document a difference in the incidence of a particular disease or condition; consideration must then be given to the reasons for, and significance of, the difference.

Hypotheses put forward to account for sex differences in patterns of mortality and/or morbidity tend to be either biologically oriented, so that explanations are sought in terms of genetic or hormonal differences between women and men, or socially oriented, whereby socialisation patterns or differences in lifestyle are presumed to be influential factors.

It is not the purpose of this paper to enter into this debate. However, it is important to be aware of these wider issues, so that a descriptive overview such as this can be seen in context. This paper represents a starting point, not an end point, for an exploration of women's health in New Zealand.

REFERENCES

Gordis, L. (1984), "Implications of Epidemiologic Data for Developing Health Policy for Women", in *The Changing Risk of Disease in Women: An Epidemiological Approach*, edited by E.B. Gold, Lexington MA: The Collamore Press, D.C. Heath and Co., 299-315.

Hospital and Selected Morbidity Data, 1968, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1972-1973, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1978, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1979, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1980, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1981, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1982, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1983, Wellington: National Health Statistics Centre, Department of Health.

Hospital and Selected Morbidity Data, 1984, Wellington: National Health Statistics Center, Department of Health.

Jack, A., Dowland, J., Dourado, S.S., and Hyslop, J.R. (1981), "Physical Disability - Results of a Survey in the Wellington Hospital Board Area", Wellington: MSRU, Department of Health. (Special Report no. 59).

Maclean, U. (1985), "Women and Health in Europe: The Scope and Limits of Epidemiology", *International Journal of Health Services*, 15, 665-676.

Mental Health Data, 1968, Wellington: National Health Statistics Centre, Department of Health.

Mental Health Data, 1973, Wellington: National Health Statistics Centre, Department of Health.

- Mental Health Data, 1977-78, Wellington: National Health Statistics Centre, Department of Health.
- Mental Health Data, 1983, Wellington: National Health Statistics Centre, Department of Health.
- Mortality and Demographic Data, 1968, Wellington: National Health Statistics Centre, Department of Health.
- Mortality and Demographic Data, 1973, Wellington: National Health Statistics Centre, Department of Health.
- Mortality and Demographic Data, 1978, Wellington: National Health Statistics Centre, Department of Health.
- Mortality and Demographic Data, 1983, Wellington: National Health Statistics Centre, Department of Health.
- Nathanson, C.A. (1975), "Illness and the Feminine Role: A Theoretical Review", *Social Science and Medicine*, 9, 57-62.
- Nathanson, C.A. (1977), "Sex, Illness, and Medical Care - A Review of Data, Theory, and Method", *Social Science and Medicine*, 11, 13-25.
- New Zealand Life Tables, 1975-77, Wellington: Department of Statistics, 1979. (Plus additional, unpublished Tables 1-6 for 1980-82.)
- New Zealand Official Yearbook 1968*, Wellington: Department of Statistics.
- New Zealand Official Yearbook 1983*, Wellington: Department of Statistics.
- North Canterbury General Practice Clinical Caseloads, Christchurch: Research Committee, Canterbury Faculty, Royal New Zealand College of General Practitioners, 1983.
- Ortmeyer, L.F. (1979), "Females Natural Advantage? Or, the Unhealthy Environment of Males?", *Women and Health*, 4, 121-133.
- Report on the Social Indicators Survey 1980-81, Wellington: Department of Statistics, 1984.
- Rice, D.P. & Cugliani, A.S. (1980), "Health Status of American Women", *Women and Health*, 5, 5-22.
- Rice, D.P., Hing, E., Kovar, M.G., & Prager, K. (1984), "Sex Differences in Disease Risk", in *The Changing Risk of Disease in Women: An Epidemiological Approach*, edited by E.B. Gold, Lexington, MA: The Collamore Press, D.C. Heath and Co., 1-36.

The Hamilton Health District Survey: Preliminary Feedback of Results on the CoMedCa Survey, Hamilton: Research Committee, Royal New Zealand College of General Practitioners, 1983.

Verbrugge, L.M. (1979), "Female Illness Rates and Illness Behavior: Testing Hypotheses about Sex Differences in Health", *Women and Health*, 4, 61-79.

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