Older Population and Health System: A profile of Botswana

I. Executive Summary and Recommendations

Executive Summary

The main health problem in Botswana like most other developing countries is HIV/AIDS. In 2002 the prevalence was 38 percent in the general population while immunizable diseases are on the decline. However, non-communicable diseases are also on the increase as can be observed from the trends of diseases/conditions such as hypertension, cancers and diabetes (health statistics reports). It is clear also from available statistics that the population of those at risk of these diseases is (50 years and above) is increasing

Health care systems in most developing countries are designed to deal with acute conditions/diseases. Therefore, there is need for a shift towards addressing the problem of chronic conditions such as cancers, diabetes, hypertension, etc hence the Intra study was timeous.

The study addressed the following areas:

- The organization of health services with emphasis on addressing 'active ageing and life course'.
- Utilization of health services by those who were 50 years and above.
- The ability of the health systems in addressing issues/problems of elderly in terms of availability of services.

The study employed both the qualitative and quantitative approach. In the quantitative approach a stratified random sampling method was used to select the facilities. Stratification was based on the health Districts, where the primary sampling units were health facilities which were chosen through randomization. The outpatient attendances for the previous years were used as weights to determine the number of elderly patients (the weights were applied to the projected 2001 population for each district) to be included in the sample for each health district. Respondents were selected for an interview at each selected health care facility on any given week day to arrive at a sample of eligible persons attending the facility.

The Ministry of Health put together a Task Force composed of staff from WHO, Ministry of Health staff and the University of Botswana to undertake the study. The Task Force were expected to provide professional and technical advice on the study.
The Government of Botswana through the Ministry of Health was undertaking the study representing AFRO joining the following countries other WHO regions: Chile, Jamaica, Lebanon, Thailand and South Korea. The reasons for the inclusion of Botswana in the project included the political will, population size and a well established primary health care system.

Recommendations for the Ministry of Health

1. Cascading of the performance improvement initiatives (PMS) to all levels of the health care delivery system to be considered as a matter of urgency in order to improve service delivery as 47% of the respondents indicated that the waiting time before service provision was too long. Waiting time is major issue which customers have expressed in other fora.

2. A community based study be conducted on hypertension and stroke including other related diseases to argument the findings of this institutionalized study. There need to explore for the contributory factors of hypertension as its increase is alarming.

3. Development of a policy or guidelines on user fees in view of the health reforms that are envisaged. This recommendation is made because 83% of hypertensive patients who were interviewed indicated that they had paid nothing for the services while 16% said they paid for the services. Development of a social security policy that broadly spells out the health benefits for defined groups including the elderly

4. Review of the drug policy on chronic conditions so there are standardized regimes for conditions such as hypertension taking cognizance of the health care delivery system. Home bound elderly programs be initiated using an NGO that has interest in providing services for the elderly such as the retired nurses association group who have expressed interest.

5. Home bound elderly programs be initiated using an NGO that has interest in providing services for the elderly such as the retired nurses association group who have expressed interest.

6. Strengthen mobile health services that will also target the elderly as the findings of the study indicate that 48% felt the health facilities were far. Transport was also raised as a major constraint as 28.4% of respondents said they had difficulties with transport to health facilities hence 62% indicated that they walked. The findings above should be taken into consideration given the nature of health problems of the elderly which include arthritis and the general body aches associated with ageing.

7. Strengthen health promotion services targeting non communicable diseases that are on the increase. Focus should be put on the risk factors of these diseases while putting in place screening services for cancers, diabetes and hypertension in the health care facilities to net those at risk.

II. Background on Botswana

Botswana has not only experienced a rapid population ageing but also rapid economic growth since 1966. The rapid growth in economic advancement has resulted in increased Gross Domestic Product (GDP) and Gross National Product (GNP) and improvements in general living conditions.

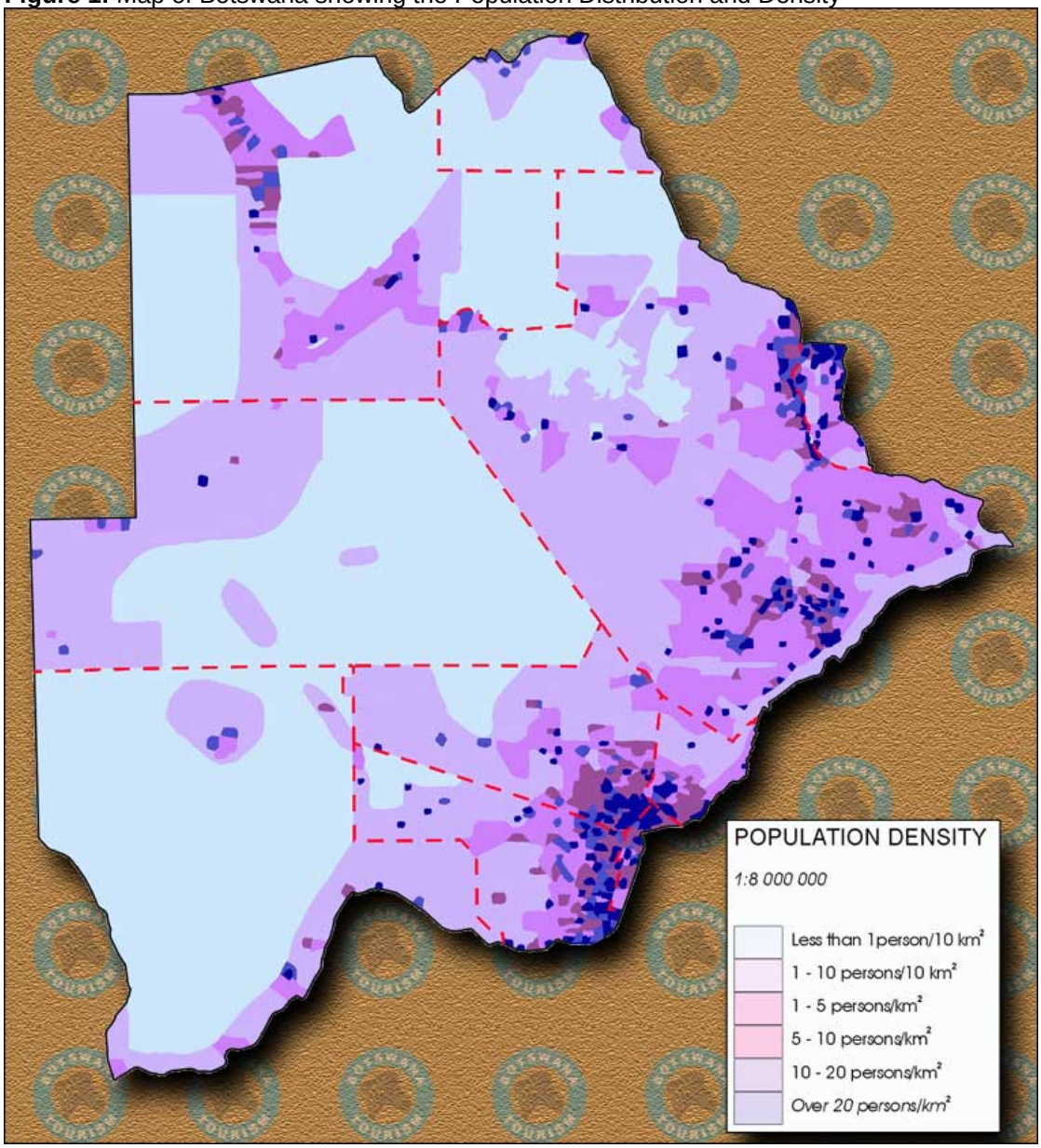
In the period between 1966 and 1996 the average annual rate of growth in the GDP was 9 percent, and GNP increased from a low of P746.0 million in 1974/5 to P5928.9 million in 1997/98. Furthermore, there have been indications that until the recent advent of HIV/AIDS, the population of Botswana has been having a decent living according to Botswana human development index and Botswana human poverty index (Botswana Human Development Report, 1997 & 2000). Unfortunately these economic achievements cannot be said to benefit the entire population equally, since the rural areas do not benefit much from the significant growth in the economy, income and wealth compared to urban areas. The skewed distribution of resources clearly has adverse effects on the provision of health care to the rural population, who experience high infants deaths and high incidence of morbidity in the adult population.

III. Demographic Trends

1. Population Distribution

According to the 2001 Botswana Population and Housing Census the spatial distribution of the population of Botswana is concentrated in the South Eastern region (Includes: Gaborone, Lobatse, South East, Kgatleng and Southern) with about a third of the population residing in this region, whilst the North Western region (Includes: Ngamiland (Northwest), Chobe, Ghanzi and Kgalagadi) constitutes about 13 percent of the population. This is indicative of a widely diverse spatial distribution of the population of Botswana. This diversity in the distribution of population relates to the infrastructural development, provision, access to and distribution of health facilities, for instances there are fewer health facilities in the North Western region compared to say the South Eastern. Figure 1 below shows the distribution and density of the population of Botswana.

Figure 1: Map of Botswana showing the Population Distribution and Density



2. Age and Sex Structure:

The 2001 census preliminary results show that the total enumerated population is 1,678,891 as compared to the 1991 population, which stood at 1.3 million. Suggesting an annual growth in population of 2.38 percent in 2001 compared to 3.5 percent in 1991 (CSO, 2001).

Table 1: Population 50 years and above – de facto – 2001 (low variant)

Age group	Male	Female	Total
50 – 54	24,000	26,000	50,000
55 – 59	18,000	19,000	37,000
60 – 64	14,000	16,000	30,000
65 – 69	9,000	12,000	21,000
70 – 74	7,000	10,000	17,000
75 – 79	5,000	6,000	11,000
80+	4,000	7,000	11,000
Total	81,000	96,000	177,000

The above figures constitute population estimates for 2001 employing the low variant giving us a total population of 1,691,000 as compared to the Census population of the same year of 1,678,891. (The statistics on age groups' 50 years and above for the 2001 Census was not available at the time of preparation of the proposal).

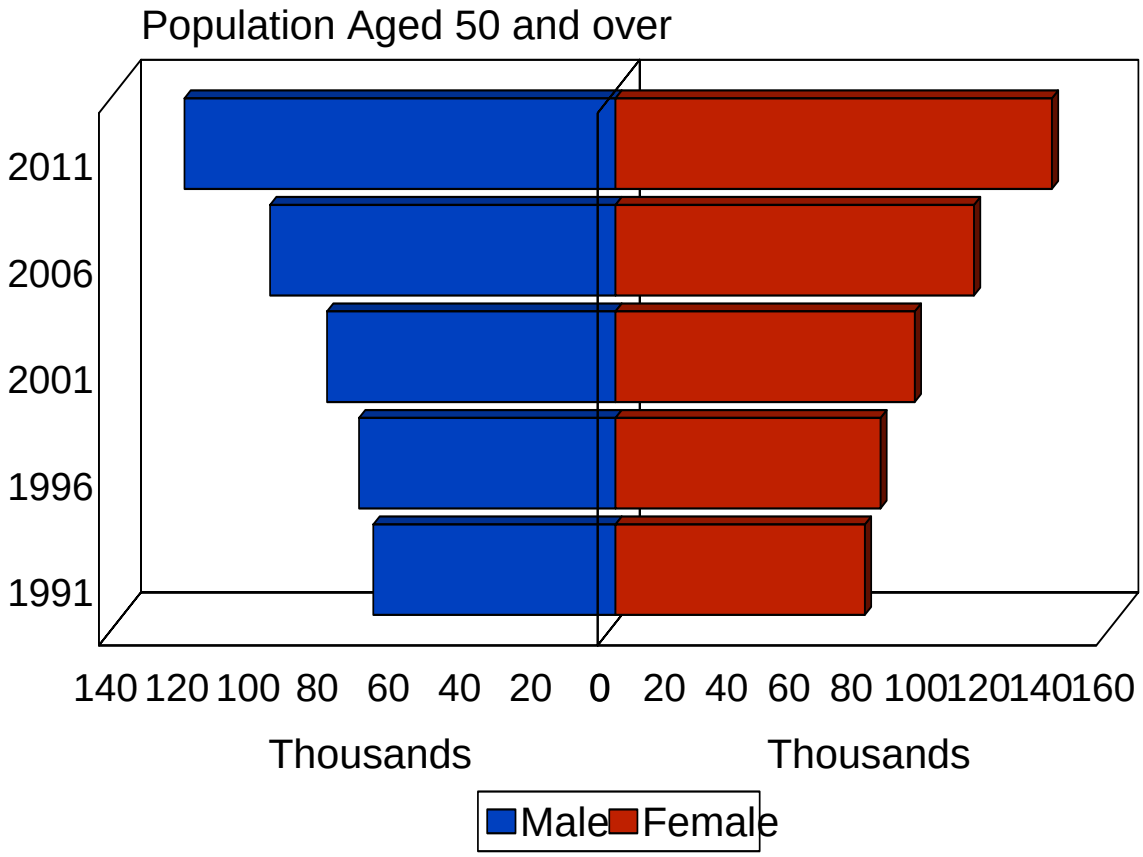
The figures above indicate a decrease in numbers as the age increases except for women aged 80 years and above where a slight increase is observed. This phenomenon may be attributable to the longer life expectancy of women as compared to men and that they are lumped together as 80 years plus.

The total number of people who are 50 years of age and above is 177, 000, which constitutes 10.5% of the country's total population. The males constitute 4.8% and females 5.7% of the country's total population. However, females constitute 54.2% of those 50 years and above while the remainder are male. Hence there are more women than men who are 50 years and above.

Botswana is one of the least populated countries in Africa. The 2001 Population and Housing Census revealed a total population of 1,678,891. The population density was found to have increased from 2 persons per square kilometre in 1991 to 3 persons per square kilometre in 2001. However, the population growth rate has declined from 3.50% between 1981 to 1991 to 2.38% between 1991 to 2001 inter-census period. The total fertility rate has declined from 4.2 births in 1991 to 3.3 births in 2001 per woman (WHO Country Cooperation Strategy, Botswana, 2003 – 2007).

The crude death rate per 1000 has increased from 11.5 in 1991 to 12.4 in 2001. The infant mortality rate and the under-five mortality rate were found to be 57 and 75 per live births in 2000. The general fertility rate per 1000 has dropped from 161 in 1991 to 106.7 in 2001. The life expectancy has also declined from 65 in 1991 to 56 years in 2001. Many of these reversals in past achievements are attributable to the HIV/AIDS pandemic (ibid).

Figure 2: Population Pyramid for Persons aged 50 Years and above - de jure Projections for the period 1991 – 2011



Source: *CSO, 1991*

Despite the reversal by HIV/AIDS, which is the most important public health challenge for Botswana, we observe in Fig. 1 that there is an increase in the age group 50 years and above. In actual fact, the population aged 50 years and above will increase from the current 10.5% in 2001 to 12.5% in 2011 of the total population of the country. This translates into an increase in the population aged 50 years and above by 2% in 10 years (Central Statistical Office, April 1997).

Therefore with this speed of unprecedented population ageing, the need for putting in place strategies to address problems of the aged cannot be over-emphasized. The aged will constitute well over 250, 000 of the country's total population by the year 2011. There is need to urgently put in place health systems that will respond adequately to the changing epidemiological picture which Botswana is under-going.

The population of women in all age groups surpasses that of men indicating that the burden of disease is more in women. Unfortunately, in our African culture, women bear the responsibility of nursing the sick and taking care of the home generally. In this era of HIV/AIDS, the same women who may be themselves suffering from chronic non-communicable conditions have to care for the sick at home most of whom may be HIV/AIDS victims who are in most cases younger than them. We know by now that the number of orphans has increased in every country due to the HIV/AIDS pandemic and the same elderly persons have to take care of them. It is hoped that the programme on active ageing will address the plight of elderly with focus on women.

IV. Old Population: General Assessments

1. Impact of Modernization on the Elderly and Socio-economic Changes

- Poverty [marginalisation of the subsistence agricultural sector]
- Loss of social and economic support from economically active members of the family [Negligence by the children [+community]
- Weakening of institutions that functioned as sources of social and economic support

2. Statement of the problem

The speed of population ageing in developing countries is unprecedented. While the ageing process in the developed world took place over a relatively long period of time, the experience in the South is being compressed into a few decades. This fast ageing process is the result of impressive gains in life expectancy at birth (LEB) – reflecting fast declining mortality rates, particularly since the 1950s – followed by even faster declines in total fertility rates (TFR)

Health systems are urgently required to respond to the resulting epidemiological shift already observed in a number of developing countries. Policies are not in place and a piecemeal approach only aggravates ineffective and inefficient use of resources. Ad hoc 'solutions' are to be avoided. The opportunity costs are considerable. Every time that resources are ill utilized to cope with the consequences of fast population ageing, a lost opportunity to use such resources elsewhere will be translated into more suffering and unresolved problems in other areas of the health sector.

Mismanagement and missed opportunity to prevent or to adequately deal with age-related non-communicable diseases (NCDs) lead to increases in their incidence, prevalence and complications – consequently, less resources for communicable diseases, maternal deaths or child health. The same applies to interventions aimed at behavioral changes (such as smoking cessation, dietary changes or increased physical activity). Appropriate health systems need urgently to address the lack of effective protocols, which might explain, for instance, the unacceptably high case fatality rate of a disease such as stroke.

While the models embraced by affluent countries do offer some lessons they are, by and large, of limited relevance. That is because already developed countries not only had a much longer period of time to adapt to 'ageing', but they experienced the process of ageing enjoying the benefits of socio-economic development. By contrast, developing countries are fast ageing well before full development has been achieved. Furthermore, the premature onset of common NCDs – which is often the case in the developing world – in itself aggravates or precipitates poverty, not only to the affected individual, but also to the whole family unit.

3. Significance

Improved health systems in response to rapid ageing are also necessary from a socio-economic point of view. They would in the end result in increased productivity (of the whole family unit), as well as in improved effectiveness and efficiency of interventions.
With rapid population ageing the burden of disease increases not only amongst the aged but also amongst other family members with the advent of HIV/AIDS. In the African context, the elderly bear the responsibility of nursing the sick and taking care of the young children.

In this era of HIV/AIDS, the same elderly persons who may themselves be suffering from chronic non-communicable conditions have to care for the sick at home most of whom are HIV/AIDS patients who are in most cases younger than them. The number of orphans has increased in

every country due to the HIV/AIDS pandemic and the same elderly persons have to take care of them. It's hoped that the program on active ageing will address the plight of elderly since they are also affected and infected with HIV/AIDS.

Since the health systems are presently based on providing care to acute episodic conditions, they are not geared towards chronic care needs and especially the care for the aged. A consultation will be held to provide a state-of-the-art review and to discuss the world-wide research agenda required on key aspects of integrated health systems in response to rapid population ageing.
Special focus on:

(i) New approaches to chronic care

(ii) Compliance and adherence to treatment of preventive interventions

(iii) Capacity building with emphasis on the degree of preparedness of the PHC sector to meet the increasing demands created by population ageing i.e. away from an exclusive focus on acute episodes towards the provision of chronic care in the community of conditions that cannot be cured and require continuing monitoring.

At the end of the project, a meeting will be conveyed with the specific aims of facilitating the exchange of experiences and extrapolating the findings towards general policy guidelines to be presented as a key WHO contribution at the UN Assembly on Ageing as well as to enhance the country action that is required locally to meet the needs and demands of fast ageing populations**.**

V. Old Population: Health Indicators

1. The Nature of Health Problems in Botswana

The trends in ill health in Botswana indicate a decline in the importance of childhood immunizable diseases and an increase in non-communicable diseases. The increase in non-communicable diseases, more especially hypertension, cancer and diabetes, afflicts the old than the young. In fact from the health statistics reports the past 18 years has seen an unprecedented increase in the number of cases of non-communicable diseases. For instance hypertension is a more common cause of morbidity and mortality related to cardiovascular diseases and has increased five-fold over the period 1980 – 1998 (Health Statistics Reports, 1980 – 1998).

Figure 3: Trend in Cancer, Diabetes and Hypertension related morbidity

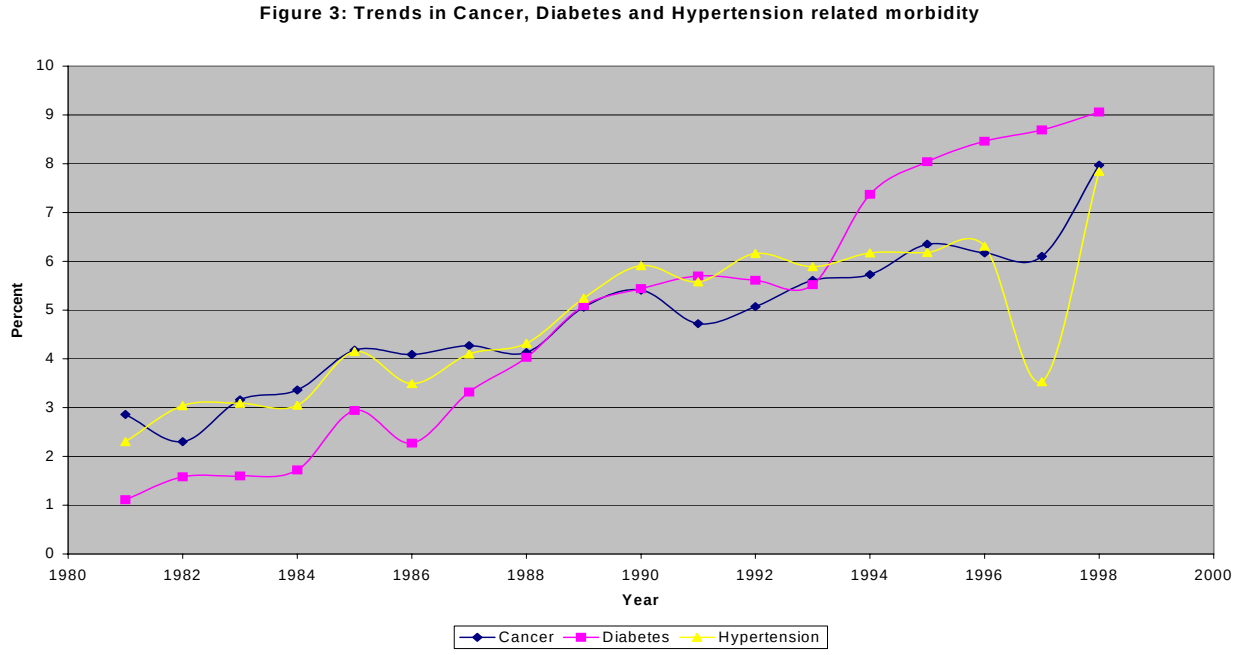
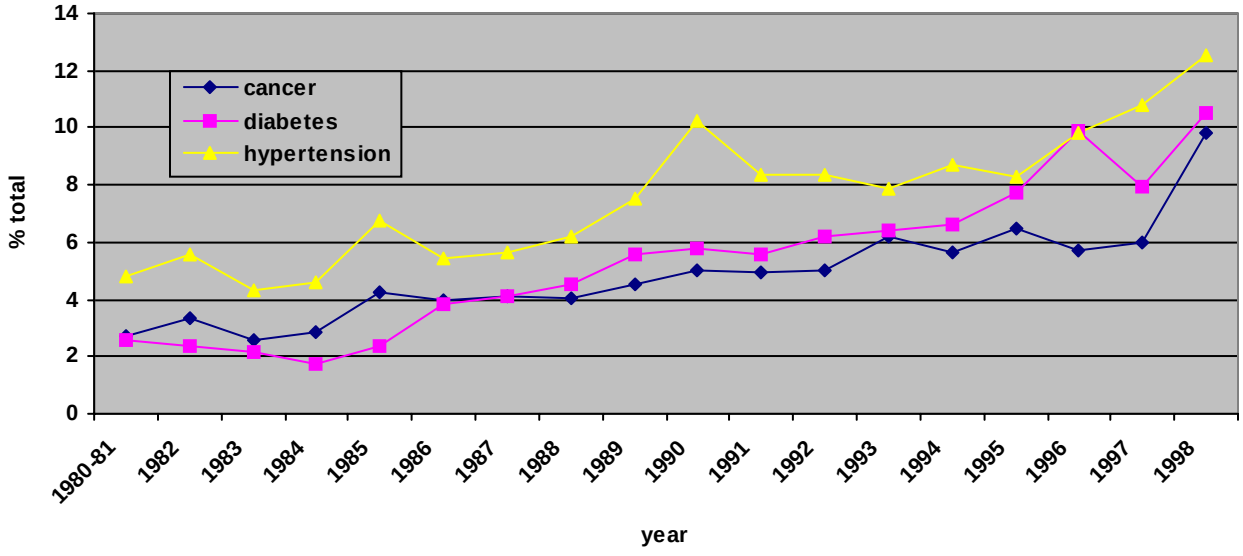


Figure 4: Trends in Cancer, Diabetes and Hypertension Mortality 1980 – 1998
Source: Health Statistics 1980-1998



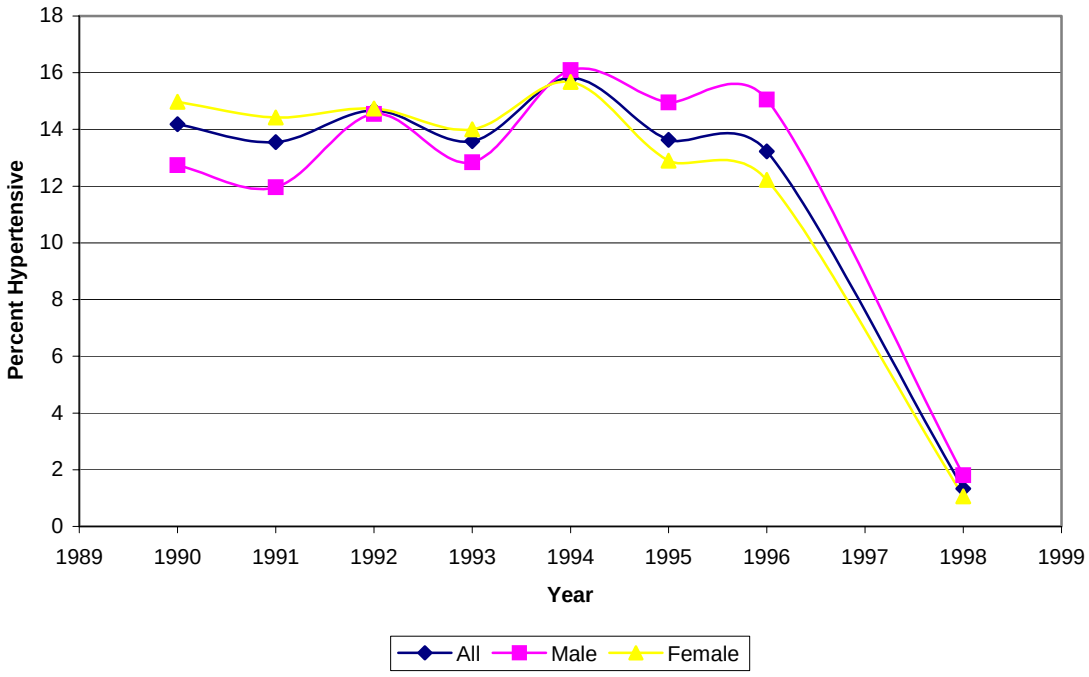
As nations modernize, there tends to be improvements in the social, economic, and health well being of the population. These socioeconomic benefits seem to only reduce the adversity of communicable diseases among the young children in the short run ignoring the effect of non-communicable diseases. These diseases are mainly related to changes in life style, and high life expectancy. Even though infectious diseases still remain the most important cause of ill health and death in developing countries, the conditions of health that were conducive for infectious and parasitic diseases to spread are being replaced by more sanitary condition, improved medical treatment and better lifestyles. This represents a paradigm shift in the burden of disease from communicable to non-communicable diseases. (S. Joy Olshansky and A. Brian Ault, 1986).

Apart from these malignant causes of morbidity and mortality in the developing nations populations HIV/AIDS has become a national emergency as Botswana has the highest incidence of HIV/AIDS in the world. Although HIV/AIDS is common amongst the 15 – 49 age group, this disease impacts on all age groups across the lifespan. With the overcrowding of hospitals and as a consequence of the introduction of the Home Based Care Program the burden of care has shifted from hospital to the elderly who are mainly caregivers and carers of HIV/AIDS orphans.

2. Hypertension

The incidence of hypertension and stroke has steadily increased over the years, especially among older persons. The figures 5 and 6 that follow indicate the increasing prevalence, mortality and morbidity of hypertension and stroke. The drop in the incidence of hypertension inpatient morbidity in figure 5 is due to the fact that there were no data available for the year 1997 and only part of the data seemed to have been entered in 1998. There are differences in the percentages of hypertension inpatient morbidity between males and females over the years. However, there is no evidence to suggest marked significant differences in inpatient morbidity between males and females even though females are the mostly affected than the males throughout the years. In analyzing the information from the health statistics reports for the period 1980 – 98 one finds that there are fluctuations in the numbers of persons with ill-health for both sexes as the age increases. For instance the number of persons with morbid condition due to hypertension in the age group 55-64 is lower than in the age group 45-54 and 65 and above throughout the years.

Figure 5: Trends in Inpatient Hypertesion Morbidity for the Period 1990-98



Mortality follows the same trend as morbidity. Females are the ones dying mostly from hypertension than males throughout the period. There is also an increasing trend in the number of people dying from age 45. It seems from the statistics that the number of persons dying from hypertensive morbidity increases with age.

3. Stroke

The number of inpatients with stroke increases with age for both sexes. There is a clear trend of an increase in the total number of patients with stroke for both sexes from 1993 to 1998. The number of deaths due to stroke increases with the age for both males and females (Table 5).

Figure 6: Trends in Inpatient Stroke Morbidity for the Period 1990-98

Figure 6: Trends in Inpatient Stroke Morbidity for the Period 1990-98

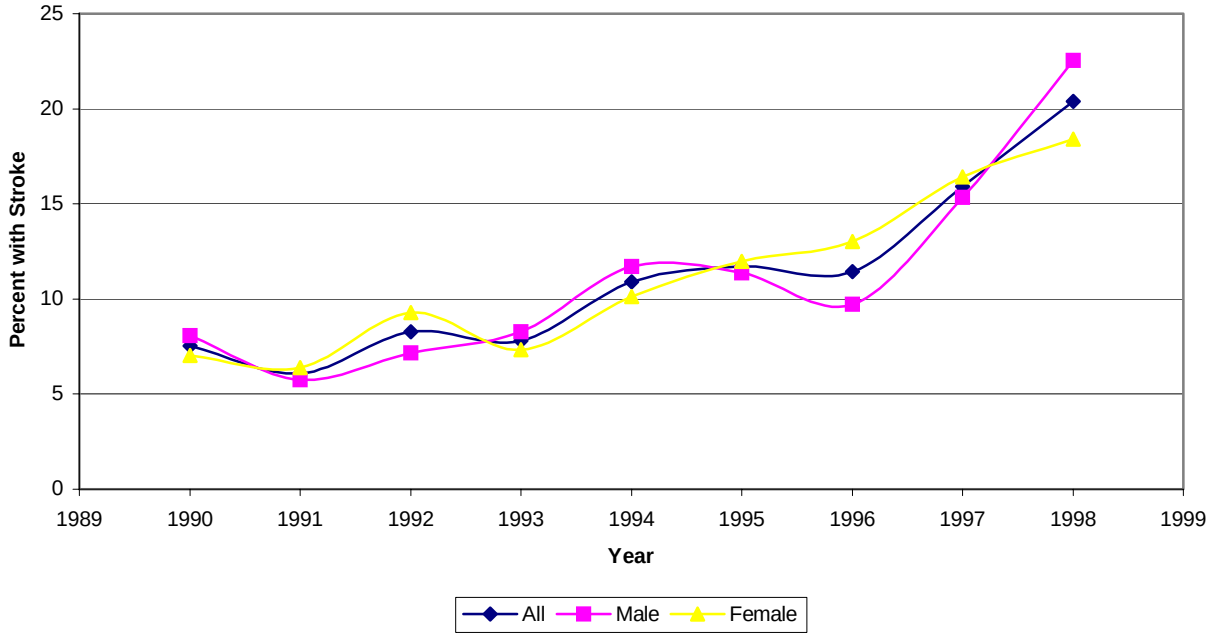


Figure 7: Cumulative Hypertension morbidity and mortality by age, 1980 – 1998

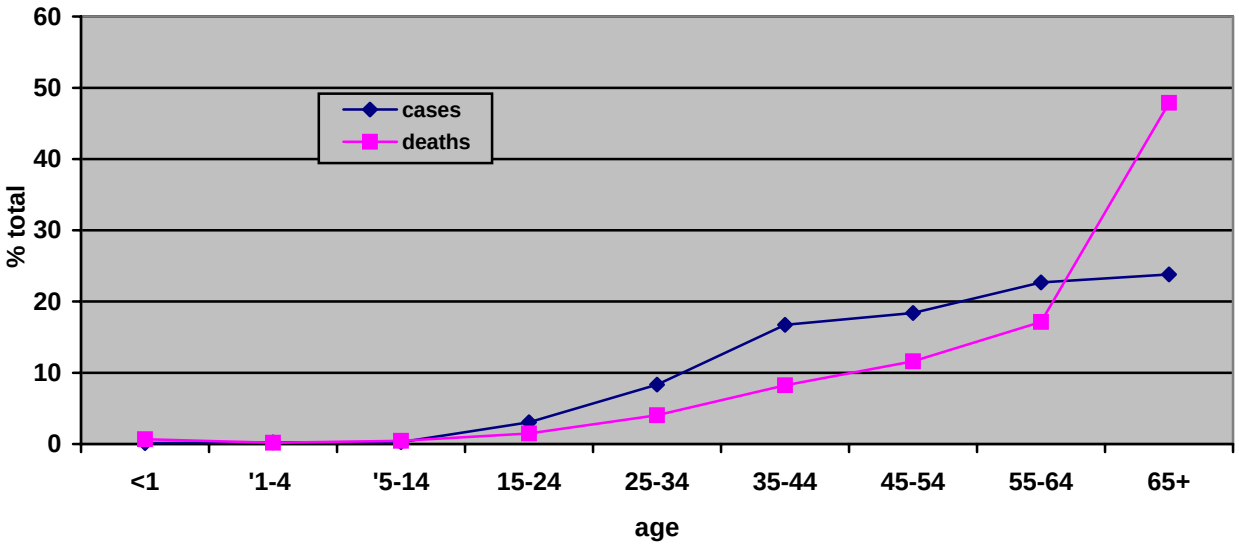
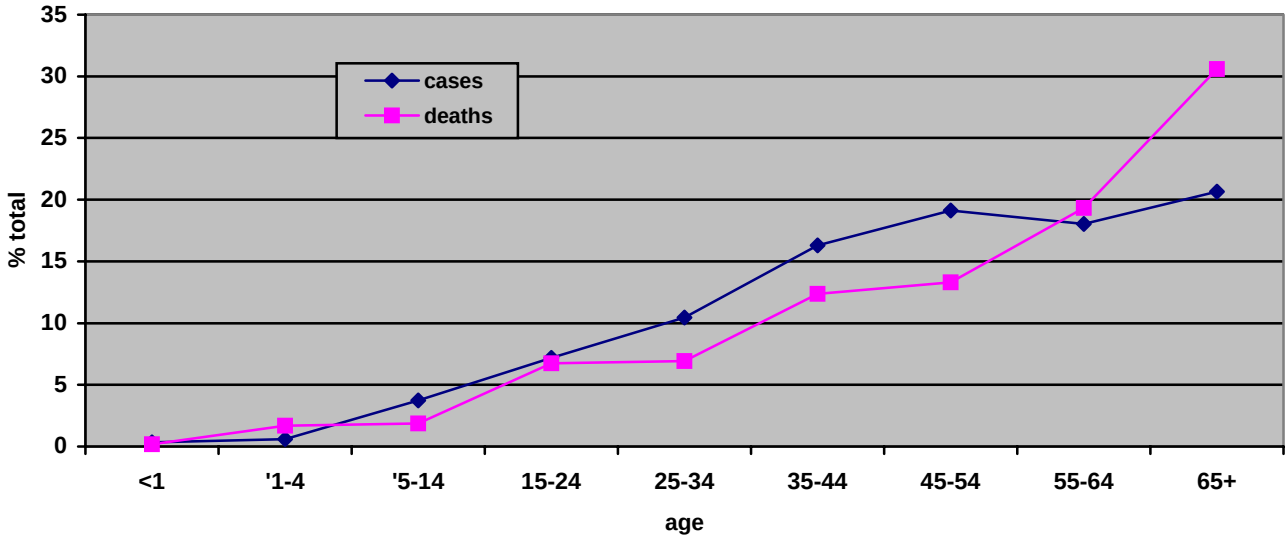


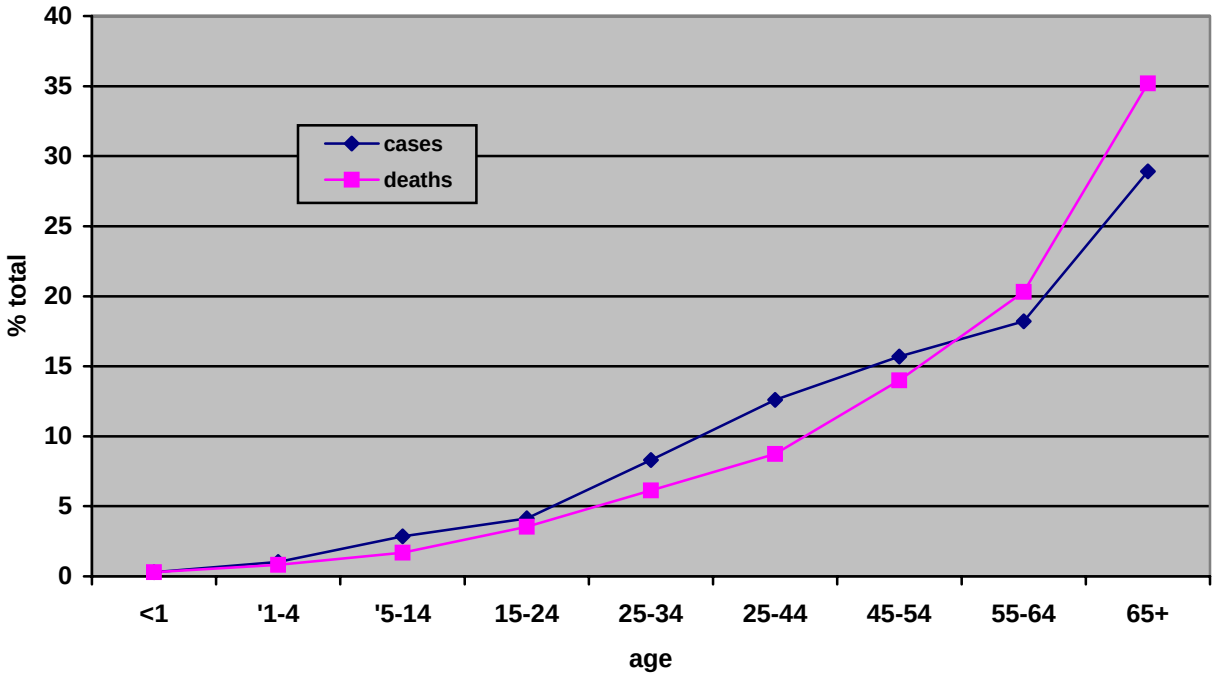
Figure 8: Cumulative Diabetes morbidity and mortality by age, 1980 – 1998



Source: *Central Statistical Office; Health Statistics Unit Reports*

Figure 7 and 8 above indicate clearly to us that the older one becomes the most likely that he or she may develop hypertension and its complications, particularly premature death. We also observe that the burden of disease is more in the age group of 45 years and above. The morbidity and mortality of hypertension and diabetes follow an almost similar course with a peak at age 65 years and above. The picture suggests a strong link between the two diseases. Therefore, a number of patients may be having both conditions concurrently.

Figure 9: Morbidity and mortality due to malignancies, 1980 – 1999



Source*: Health Statistics Reports, 1980 – 1999*

Figure 9 indicates that malignancies are more common in the elderly. This is a clear indication of the nature of the burden of disease as observed in Botswana. The elderly are the caregivers in our societies but as observed here, they are also overwhelmed with chronic conditions. Therefore, the need to address issues related to geriatrics cannot be over-emphasized

VI. Health System

1. The Social Security Policy

The Social Security policy of Botswana has not yet been formulated, at least according to the literature that has so far been reviewed. There is however, a Pensions scheme, which has been in existence since 1968 and was amended in 1998 to include more benefits. Over and above the Old age pension scheme was established with the intention of easing the economic hardships that the elderly experienced. Since the traditional social support system, which for years has been thought to be working, has with no doubt collapsed. This realization by the government has prompted the introduction of the old age pension scheme through the Ministry of Local Government, which has by now been going through the teething problems especially with regard to the elderly pension which is provided to the elderly people aged 65 years and above. Unfortunately, the newly introduced policy has not extended health care benefits to the elderly such as provision of free medical attention to the elderly.

2. Health Care Delivery System:

The Government of Botswana under the Ministry of Health (MOH) provides for most of the health needs of the population of Botswana. The health budget comprises 8% of the total budget. However, the provision of health care is a joint venture between the Ministry of Health and Ministry of Local Government. As a result of the decentralization process the Ministry of Local Government provides the bulk of Primary Health Care services that are coordinated or administered on a day-to-day basis by District Health Teams (DHT). The DHT has a network of 257 clinics, 336 health –posts and 761 mobile stops (Master Health Facility List 2003, Health Statistics Unit), while the Ministry of Health directly administers two referral hospitals, six district hospitals, 17 primary hospitals and one mental hospital. The Ministry of Health retains the portfolio responsibility for health policy development, professional/technical guidance and supervision of health care irrespective of the provider or institution.

People who are on medical Aid mostly use the private health care system. There are two types of medical aid schemes; one for people who are employed in the private sector and another that is for public civil servants. Unemployed people have an option to join the medical Aid schemes. However, the majority of Batswana mostly use the public sector of health care as patients and clients pay nominal fees and no one is ever turned away for lack of fees. Health care and service for the under 12 year old in Botswana is provided in public health facilities free of charge, whereas citizen adults are expected to pay a minimum of P2.00 (approximately US$0.40) for medical expenses which covers consultation, and treatment (inclusive of drugs).

The Primary Health Care Strategy is to attain health for all, in pursuit of the national objectives in the context of vision 2016. Hence the National Health Care Policy stipulates as priority activities geared towards health for all: health promotion, provision of both preventive and curative care, as well as the need for initiation of special measures in respect of the high risk groups such as children under five, pregnant women and the elderly.

3. Emerging Challenges for the Health Care System

- An increasing incidence of chronic illnesses.
- Accessibility; although there are clinics within easy reach of every village, one finds that the elderly are sometimes unable to reach the clinics due to ill health; therefore, outreach programs should be in place where access to health care is a problem.

- Care giving; the burden of care of the sick in the family and custody of grand children under poor conditions in this era of the AIDS pandemic

- Respite programs: in some instances access to health care is constrained by the multiplicity of the roles of the elderly, leaving them no time to attend to their own health care needs. Perhaps a culturally acceptable respite program can be put in place to relieve elderly caregivers.

- Health promotion: lack of knowledge about aging per se, chronic illnesses and disability associated with aging has been cited as a problem. Primary and secondary interventions aimed at health promotion of the elderly should be put in place.

- HIV/AIDS; lack of knowledge is also prevalent with respect to HIV/AIDS among older persons. Health Education in this area can assist the elderly to not only take care of themselves, but to also serve as resource persons in this area.

Acknowledgements

The Non Communicable Disease control programme is highly indebted to staff members of the District health teams, Hospitals, the intra project task force, the advisors and the general public for their participation in the study. We wish to thank the task force members their expertise as they have made valuable contributions to the study.

Below are members of the task force:

Dr T. Gaolathe	Physician	Princess Marina Hospital
2. Dr S. Shaibu	Lecturer	University of Botswana
3. Mr K. Bainame	Lecturer	University of Botswana
4. Mr E. Ngome	Lecturer	University of Botswana
5. Ms T. Phindela	PHO(Project coordinator)	Epidemiology Unit
6. Mrs J. Shongwe	HO	Statistics Unit (MOH)
7. Dr S. Songolo	PHS	Epidemiology Unit
8. Ms S. Halabi	Ag PRO	Research Unit
9. Dr E. Tsegaye	DPC	WHO
10. Ms M. Ndaba	SNO	Epidemiology Unit

Advisers:

1. Dr T.L. Moeti	MOH
2. Prof. S. Tlou	UB
3. Prof. U. Wembodinga	EDCU
4. Dr R. Mwansa	EDCU

Finally we are grateful for the encouragement and financial support from the Ministry of Health and World Health Organisation that made the study success