MONTSERRAT

Ministry of Health and Social Services

Annual Report

of the

Chief Medical Officer

2011

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1. INTRODUCTION

Writing an Annual Report as a Chief Medical Officer (CMO) has obviously proved an interesting experience for my predecessors. They vary considerably in style and content. In addition, there are many other non CMO reports which sit on the shelf above the CMOs desk, some of which appear to cover the same ground.

Guidance from the Faculty of Public Health in the UK indicates that the Director of Public Health (DPH) report should in the first case be independent of the organization in which the DPH is placed and that it should;

- Contribute to improving the health and well-being of the local population.
- Reduce health inequalities.
- Promote action for better health, through measuring progress towards health targets.
- Assist with the planning and monitoring of local programmes and services that impact on health over time.

The guidance goes on (paraphrased) "The annual report is a professional statement, objectively interpreted from sound epidemiological evidence and an important vehicle by which key issues can be identified, problems flagged up, progress reported and hence serve the local community. (Faculty of Public Health) (Guidance on the production and Content of Annual Reports for Directors of Public Health in Primary Care Trusts)

The position of CMO in Montserrat is similar in many ways to that of the DPH in the UK.

1.1 Content of the Report

The report needs to be based on available epidemiological and other information. This should include information on health and well-being, lifestyles, social factors, access to services and other environmental factors relevant to well-being.

The report should include a statement on environmental factors and health protection and communicable disease:

- Address inequalities in health
- Consider past recommendations and review progress
- Consider progress on implementing public health programmes

This report will follow this format.

2 POPULATION AND DEMOGRAPHY

The recent 2011 census data gives the Island a total population of 4922 people

POPULATION OF MONTSERRAT 2011

	Male	**Female**	**Total**	**% Total**
0-14	490	481	971	19.7
15-29	485	402	897	18.2
30-44	499	573	1072	21.8
45-59	560	466	1026	20.8
60 +	512	454	966	19.6
TOTAL	**2546**	**2376**	**4922**	**100.1**

Table 1

This shows a preponderance of men compared to women on the island. 19.6% of residents are over the age of 60. This represents an increase from 2006 by 2%. Non Nationals in 2011 comprised 1327 people (27.8%) of the total population and made up 86 of 881 people over the age of 60 (9.8%). In both cases the proportion of non-Montserratians has fallen since 2006 and the proportion staying beyond 60 has dropped from 16.5% to 9.8%.

Under normal circumstances it would be expected that the population on Montserrat would age with a progressive increase in the proportion of people over the age of 60. This appears to be the case. However 32.5% of residents in 2006 were non Montserratian and whether they will continue to live in Montserrat after the age of 60 will remain an open question. The 2011 data indicated that many left the island on reaching retirement age. Expectations that Montserratians currently living overseas will return will also remain an open question until the evidence is available to identify if these possible migratory patterns are significant in population terms.

The development of an increasing number of people over the age of 60 has a significant bearing on the health service, as people will have an increasing level of disability and chronic illness which will make demands on service provision and service financing.

2.1 Mortality

There are between 50-60 deaths a year. It is difficult with year on year variation to identify specific trends. This is probably not necessary. Table 2 identifies the leading causes of death over the period 1999-2009. (Health Statistics Handbook, West, Gilmour and Ponde 2010)

LEADING CAUSES OF DEATH ON MONTSERRAT 1999-2009

	Males	Females	Total	Percent
Infectious disease	7	6	13	2.3
Cancer prostate	21	0	21	3.7

Cancer breast	1	12	13	2.3
All other cancers	30	16	46	8.3
Hypertensive disease	26	29	55	9.8
Stroke (CVA)	26	23	49	8.7
Ischaemic heart Disease inc arrest and failure	54	43	97	17.3
Other Disease circulatory system	7	14	21	3.7
Diabetes mellitus	37	47	84	15.0
All other causes*	103	59	162	29.0
Total	**305**	**251**	**556**	**100.1**

Table 2

(**All other causes include trauma, pregnancy, respiratory, digestive and urinary diseases)*

This table clearly indicates that high blood pressure, heart disease and diabetes outweigh all other causes of death combined. These are deaths that are modifiable by treatment taken appropriately, or avoided and prevented by lifestyle change. All deaths from cancer were less than deaths from diabetes alone during the decade. This is likely to worsen with the probable increasing prevalence of diabetes which is characteristic of the Caribbean as a whole. (Global Status for Non Communicable diseases 2010 WHO April 2012)

The current international emphasis on Non Communicable Diseases (NCDs) is appropriate but late in coming. The Caribbean already has higher levels of diabetes and hypertension than most other places in the world. (Global status for Non Communicable Diseases 2010, WHO April 2012). It is worth reflecting in the year 2009-2010 that $EC238,582 was spent on HIV/AIDS in Montserrat locally and by the international agencies undertaking surveys producing reports and training etc., compared to EC$15,120 for all health promotion activities (excluding salaries) financed by Government in 2011. This example represents a poor alignment of financial resources, primarily by the international agencies.

2.2 Morbidity

Mortality data shows an incomplete picture as some conditions such as mental ill health are disabling and may show a relatively low mortality but have a major impact on the person who is unwell as well as those who are caring for the person or who are impacted on by his/her behavior.

HOSPITAL ADMISSIONS 1999-2009
(Ten Leading Causes of Morbidity)

Condition	number	% all admissions
Diabetes mellitus	541	24.7
Essential hypertension	397	18.1
Acute gastroenteritis	192	8.8
Chronic Respiratory disease	148	6.7
Urinary tract infection	135	6.2
Influenza/pneumonia	95	4.3
Mental/behavioral disorders	76	3.5
Threatened abortion	54	2.5
seizure	44	2.0
Prostate cancer	42	2.0
All others	465	21.2
TOTAL	2189	100.0

Table 3
(This table clearly shows the impact of morbidity in terms of hospital admissions)

The suffering caused by the leading causes of in-patient admissions and the resource utilization resulting from the high level of chronic diseases in Montserrat is very important. Very nearly half of all admissions are as a result of Diabetes mellitus, Hypertension and chronic respiratory disease. All three diseases are modifiable by public health interventions, patient education and the will to change the social and economic environment by public policy. It is necessary to point out that mortality and morbidity from HIV/AIDS does not feature in either table and attracts disproportionate human and financial resource.

An HIV/AIDS policy is currently before Cabinet and draft legislation is currently being developed with overseas support. In contrast the National Nutrition Policy went to the Executive Council (EXCO) in 2009 and has had by comparison limited international support in human or financial terms but would potentially influence the current high levels of mortality and morbidity from chronic disease considerably. There would be personal benefit to those who suffer from these diseases and those who are at risk (essentially the rest of the population). It should also, in the medium to long term, have a beneficial effect on the financial impact of ill health on health services.

The prevalence of diabetes and hypertension is difficult to estimate but registers are kept in the clinics and on the basis of these registers (which may include some duplication) figures found in Table 4.

PREVALENCE OF DIABETES AND HYPERTENSION IN CLINICS - Montserrat 2011

Condition	Total	Rate/1000pop
Diabetes	98	19.6
Hypertension	306	62.1
Diabetes and Hypertension	276	56.0
All Diabetes	374	76.0
All Hypertension	582	118.2

Table 4

(Audited report of screening of persons with Diabetes and Hypertension 2012 by Joan Moinnodeen)

The prevalence of diabetes (374 patients in the clinics) is lower than the self-reported cases of diabetes in the 2011 census, which recorded 487 people stating they had diabetes. This discrepancy may in part reflect that some diabetics may not attend the clinic but see private doctors or seek care in casualty. Self-reported cases of diabetes shows that 275 were women and 212 were men. There would appear to be a greater number of overweight or obese women on the island. If this is a finding which emerges from the forthcoming STEPS risk assessment survey, this would be consistent with findings elsewhere in the Caribbean.

The impact of disease and consequent disability falls differently in most modern economies on the poorer members of society, thus it would be expected that the impact of Chronic Non Communicable Disease (CNDC) will increasingly fall most heavily on the poor in Montserrat.

A major gap in the disease pattern is the level of illness in the clinics and outpatients. This is partly because much information is not collected. It is also very difficult to ensure that episodes of illness are not enhanced by people going from a clinic to casualty and being counted twice. Patients who attend the private practitioners are not recorded in any way by the Ministry and hence good data is difficult to find.

The burden of NCDs extends beyond the development of disease in each individual to include the impact on health services. Future approaches to management need to include the self-management of the disease or illness, once acquired. The ability of patients to manage the disease may be impaired by poor compliance with medication due to poor understanding of the lifelong nature of the illness. There may also be the inability to meet health care costs by out of pocket expenses if entitlement to free or subsidized treatment is not available.

2.3 Mental Health

Mental health makes major contribution to the disability in society in Montserrat. There are 177 persons who are looked after by the Mental Health Services. Much of this is psychotic illness but I would briefly like to make some observations on alcohol use.

3.0 ALCOHOL

As an outsider it is clear that alcohol plays an important part in the social life of many, but not all, on the island. The presence of significant public drinking is striking especially when this occurs in the morning and during working hours and sometimes while driving.

The recommended maximum alcohol intake in units of alcohol in the UK is 21 units per week for a man and 14 units per week for a woman. It is also recommended that individuals should have at least 2 alcohol-free days per week.

In 2010, the average alcohol consumption for each man, woman and child on Montserrat was just over 15 units per week. The average consumption for those aged 15 and over (*there is evidence from the Global School Health Survey 2008 that alcohol consumption and drunkenness is occurring among school age children on Montserrat*) is nearly 19 units per week. Bearing in mind many people on Montserrat do not drink alcohol this means that the majority of those who drink alcohol on the island will be drinking at unsafe limits.

The consequences of heavy alcohol consumption include diabetes and hypertension - both are widespread. There are of course significant direct alcohol related illness including liver disease. Some cancers and abdominal pain are a direct consequence of high alcohol consumption.

Table 5 compares the adult alcohol consumption on Montserrat with England

Alcohol Consumption Montserrat and England

	MONTSERRAT 2010	**ENGLAND 2008(*)**
MEN		16.8
WOMEN		8.6
BOTH	19.0***	12.7**

Table 5

* *Source General Household Survey 2008 Office of National Statistics*
** *Assumes equal numbers of men and women*
*** *Calculated from alcohol imports customs 2010*

Clearly at this level of consumption there is a need to constrain the consumption by education of the consequences. It also represents an opportunity to increase taxation on alcohol, a move justified by the adverse impact alcohol has on health and the benefits which would arise from drinking within recommended limits.

It is recommended that there should be increased taxation on health grounds alone on all alcoholic drinks and doubling the tax on all forms of alcohol over the next 2 years. It is also suggested that beers with an alcohol content of less than 4.5% should have an increase in tax of no more than 50% during the same period.

4.0 COMMUNICABLE DISEASE

It is difficult when dealing with international agencies to admit we are not certain how many people have HIV/AIDS and Sexually transmitted Infections as accurate information on patients is not available. Some practitioners refuse to give relevant information leading us to only have the number of positive tests, some of which may be duplicated. At present this is not a significant disadvantage as the agencies understand the issues of anonymity in a population so small. It is possible with a tightening financial situation, that agencies may be less willing to help where there is less than robust data to justify support.

Other major outpatient conditions which offer cause for concern other than the NCDs are Sexually Transmitted Infections (STI). School children remain an at risk group for these conditions. Teenage pregnancy under the age of 16 is a problem and a simple review undertaken by myself would indicate that over the past 10 years the teenage pregnancy rate on Montserrat has been approximately twice that of England and Wales, which is the highest in Europe. Current legislation in Montserrat makes it difficult for children under the age of 16 to access contraception or for health staff to supply it. There is an urgent need to bring such legislation up to date to enable contraception to be given to those under the age of 16 years.

The Knowledge Attitude and Practice Study undertaken among Montserrat Secondary School leavers in 2006/7 showed that 76% of males and 66% females had been sexually active at school. The wringing of hands and current legislation has not proved to be adequate protection against pregnancy, STIs or exploitive relations with young and immature people. The law needs to be changed to reflect current activity and engender a sense of responsibility by students and parents.

Concern has been expressed in some quarters at the extent of Sexually Transmitted Infections. 2010 data showed that there were less than 4 cases of Gonorrhea and an uncertain level of syphilis. The very

low levels of chlamydia probably show low levels of testing and awareness among the population to seek care for this condition.

SYPHILIS

An analysis of people tested positive for syphilis; most were in low dilutions indicating a weak reaction to the test.

Dilution	Weakly Reacting	1:2	1:4	1:8	1:16	1:32	1:64	1:128
no	102	84	46	20	7	*	*	*
Av 'age	-	68.3	61.9	63.9	74.3	*	*	*
Age/range		44-90	52-89	41-84	66-88	*	*	*

Table 6

*(*Less than 5 patients)*

Comments have been made that there is a lot of syphilis on the island. This is unlikely. The positive TPA test can also represent historic infection and usually remains positive despite satisfactory treatment. It can reflect successfully treated historic infection. (CDC Weekly February 11/2011 /60(05) 133-137)

A positive RPR test can represent a range of causes for a "False Positive" including being over the age of 80. Most "False Positive" tests have dilutions of 1:8 and below.

The age distribution which is almost exclusively skewed towards the elderly is atypical of Sexually Transmitted Infection epidemic. Out of the total of 172 people with positive RPRs only 9 were 50 years of age and less. Three had a dilution of 1:8 and above. A change of less than two dilutions e.g. 1:2 to 1:4 is unlikely to be a meaningful. A four-fold change in dilution on repeat testing is recommended by the centre for Disease Control to recognize active infection.

It is unlikely there is an active syphilis epidemic restricted almost exclusively to those over the age of 50! In the event of someone testing positive, evidence of a change in dilution should be sought before treatment. (Centre for Disease Control Treatment guidelines for syphilis 2010)

It is unclear what contact tracing occurs in the case of STIs presenting to the doctor. Yet this is the primary mechanism for preventing the onward transmission. This needs to be addressed by all doctors who treat these infections by reporting cases to the Public Health Nurses.

There is a need to develop improved protocols for the management of these diseases. A random review of some patients shows that they have been subjected to repeated testing over many years with little change in their results. It is unknown if they have been subject to unnecessary treatment.

4.1 Norovirus

At the end of the year the island had an outbreak of Norovirus (Winter Vomiting Disease) a highly infectious viral disease spread very largely by droplet infection. At the peak before Christmas, 18 to 20 cases a day were being reported. This outbreak will be covered more comprehensively in the Epidemiologist's report. However the outbreak reinforced the necessity of cleanliness and hand washing as the crucial means to restrict onward transmission.

During the year a report has been made to PAHO as part of a wider review of the Caribbean establishing both Montserrat and the Caribbean as free from Measles and German Measles. This is a significant milestone and represents a triumph for all those over the last 25 years who have consistently striven to ensure children are immunized and hence eliminating the diseases from this island.

5. EQUITY

Public policy in terms of access to, and benefits from health services may not reflect health needs but the demand of users of services, or be part of historic negotiation. The Public Health Act in Montserrat enshrines the benefits of selected civil servants in law. There is no health justification why civil servants of a certain rank should be entitled to free or subsidized care, nor is there public health justification for members of the uniformed and health services to be beneficiaries of exempt status with regard to payment of fees. The exemption granted to certain members of the population on grounds of age maybe applicable to some elderly in the population in terms of health need.

The current service is largely funded from taxation. This raises questions, for example, over the rights or otherwise of those who pay tax to have comparable benefits whether or not they are Nationals, and challenges the rights of those, including those elderly who are able to afford to pay for their care and do not pay tax, to benefit from care on the island. The current health finance review is expected to make recommendations in this regard.

There are some perverse incentives in Public Health terms which operate in Montserrat. Examples include screening for cervical cancer as the screening test is expensive and has to be paid for but the poor are more likely to suffer the disease. The cost of contraception is all or in part borne by the recipient of the service. Studies have shown that Family Planning services are among the most cost effective services as the use of contraception prevents the human and financial consequences of an unwanted pregnancy (Frostt.J.J et al Contraceptive needs and Services, National and State data 2008 update New York Guttmacher Institute 2010.) The poor are the most vulnerable to the consequences of unwanted and sometimes unaffordable pregnancy. (A review of the effectiveness and cost effectiveness of contraceptive services and interventions to encourage use of those services for socially disadvantaged young people - January 2010 SCHARR for National Institute of Health and clinical Excellence (NICE) UK)

It is difficult to undertake an equity audit, that is, to identify if people from different socioeconomic backgrounds have a differential health experience as the numbers are small in terms of mortality and hospital admissions are a weak indicator of morbidity as they can reflect differing clinical criteria for admission. Even with the numbers we have for admissions, it is unlikely that the numbers will differ enough to give a robust equity audit. The issues are further complicated by many of those who can afford to seek care off the island. It may be possible to do an equity audit on health when the 2011 census data is available so that the relationship between socio economic circumstances are related to health experience, provided people have answered, truthfully, or at all the socio-economic questions in the census.

5.1 Elderly

Over 19% of the population on Montserrat is over the age of 60. In many countries people are being expected to work until their late 60s or 70s before they can draw their pension.

With age, comes increasing frailty and in some cases isolation with bereavement. On Montserrat not only is there a significant population of elderly, but migration off the island as a result of the volcano has in many cases removed some of the traditional support structures for the elderly, their relatives, children and friends.

The approach hitherto has been to address the institutional needs through Margetson Memorial Home (MMH), a nursing home. Additional, provision exists with Golden Years, a residential home, and Lookout Warden Assisted accommodation. This provision has been a successful way to address the needs of many of the elderly. There is, however, a substantial subsidy to the Golden Years Home representing approximately $3,300 per month for each resident. Margetson Memorial Home is entirely funded by Government and the warden controlled accommodation in Lookout is also largely funded by GoM. These three (3) institutions consume significant government resources.

Internationally there has been a progressive move to;

1. Support the elderly in their own home for as long as it is safe and reasonable to do so.
2. Move the care of institutional arrangements into the private sector.

The proposed bringing together of Margetson Memorial Home (MMH) and The Golden Years Home for the Elderly begins to address point 2 but does not address point 1.

Within point 1, there are a number of refinements of care for the elderly, to include:

- Day care arrangements for those who are isolated at home;
- Day hospital arrangements in a residential or nursing home for those remaining at home who have health and nursing care needs;
- The provision of palliative care for those who are dying within a day hospital, nursing home or day care environment.

The provision of these services may help prevent institutional arrangements which usually represent the most expensive option.

Furthermore improved provision of surveillance of the health and medical needs of the elderly in the community will help to defer the institutional solution.

Among the suggestion made in some of the reports in the past has been a suggestion to develop the current clinic maids into Community Health Aides. This cadre of health workers has limited training but is able, among other tasks, to visit the elderly and ensure that early warnings of significant disease are identified and ensure the elderly person is taking medication correctly and is feeding adequately. The Community Health Aide programme

has been successful in both Jamaica and St Lucia in strengthening Primary Care. (*Consultancy to review access to Health Centers for residents of Montserrat – Ferdinand. E. 2008*) The cost of such a worker, essentially a doubling of the current clinic maids' wages, should reduce the admission to both the MMH and the Golden Years Home, as well as to the hospital.

The inclusion of MMH into the Golden Years Foundation will not of itself save money to GoM as the current support to MMH will need to continue unless enforceable cost sharing arrangements are put in place for residents. If such cost sharing arrangements are robust in terms of cost recovery there is likely to be a need for increased community based support for the elderly. Efficiency savings of staff and housekeeping costs are unlikely to be realized while the two homes are physically so widely separated. It may be possible at some stage in the future to share some staff, if both homes are on the same site. A carefully developed business plan by the Golden Years Foundation is necessary to clearly define this potential benefit and identify the risks of such an amalgamation.

5.2 Children

Children in developed economies are for the most part physically healthy. This applies to Montserrat. Children here are, for the most part, NOT faced with problems of malnutrition, poor food supply and the challenges of disease caused by poor sanitation and inadequate immunization.

The physical problems of children here are broadly similar to those of children in the UK or USA.

The surveillance of children in the UK has moved radically in the past few years away from only being concerned about the physical health of children, to take on a much broader view to include their social and psychological well-being.

The aims of health care programmes for children include:

- The promotion of optimal health, nutrition, development and emotion;
- The prevention of illness, accidental injury and child abuse;
- The recognition and, if possible, elimination of potential problems affecting development, behavior and education;
- The early detection of illness and abnormality;

(*Hall D et al The Child health Surveillance Handbook. Third Edition- 2009*)

Services for children need to be reviewed to ensure that all four of these aims are being met.

6.0 ACCESS TO SERVICES

Access to Primary and Secondary care has been reviewed in the past 4 years. I am not going to review the documents which have included two reports by Dr. Ferdinand in 2008 as well

as reports by accreditation Canada in 2008 and a situation analysis on Shared, Secondary and Specialist Services in the UKOTs by Sancho and Leach in 2005.

In Secondary care there have been recommendations for the provision of specialist Obstetrics/Gynaecology service initially on a visiting basis

However, there is also the need for enhanced specialist care in urology, orthopaedic services and occasional but regular support for cardiology and diabetology. These areas are currently being addressed, in part, in conjunction with the Montserrat Diaspora, although there are challenges in the current financial situation.

The most urgent need at the present time is obstetric and gynaecological support. This is a service which we need to have on island.

On the horizon, there is need for renal dialysis. At present someone who has end stage renal failure has a choice of dying of renal failure on Montserrat or seeking regular dialysis overseas which essentially means leaving the island never to return. This will become an increasing reality with the current prevalence of diabetes as the disease will in many cases result in renal failure. This is also a service for which we need to plan.

A common reason for referral to Antigua, at significant cost to both GoM and the individual, is imaging either with CT/MRI or mammography. Ferdinand clearly recommended that none of these imaging techniques should be introduced here unless there was improvement in the financial climate. In the case of mammography any screening programme has to have clear quality standards included within it both to avoid false positive cases leading to unnecessary worry and intervention and false negative cases leading to a missed diagnosis. False positives and false negatives are routinely monitored in national screening programmes such as the UK.

Access to services is always an issue for island communities as geography, and population size, exercise a constraint on service development. On Montserrat this is most evident in the provision of specialist services such as obstetrics and Gynaecology, orthopaedics, urology and imaging technology.

7.0 CONSEQUENCES OF THE CURRENT HEALTH PICTURE

7.1 Lifestyle

Health Services in all countries initially developed to meet the requirements of episodic need. If your arm was broken you went to the doctor to get it fixed, if you had a chest infection you went to the doctor to get cured. The developing understanding in the nineteenth century of the relationship between the individual, their socioeconomic and environmental circumstances and the discovery of microbial life lead to an explosion in major public health interventions. This was most notable in the field of water and sanitation but later also to the development of school health services, and food policies with a broader

understanding of the impact of poverty on health. This has been developed further in current public health understanding so that the same broad principles apply to the NCDs but the solutions are more complex. There is still a need to understand the underlying "agent" of disease. In the 19th century this was the microbe; in our own time, the "agent" is usually related to an unhealthy lifestyle. The concern in Montserrat is no longer inadequate water and sanitation but the social and regulatory "environment" in which we all live. The host, (all of us), are no longer victims of microbial attack but we are able to exercise informed choice on our lifestyle and habits which can and do make a significant difference to our expectation and experience of life.

7.2 Obesity

Obesity is not a consequence of life. it is an acquired state determined by an imbalance between food intake and energy use by the body. Obesity is not genetic or inbuilt. we all get fat if we eat too much and exercise too little. Conversely, if we eat too little even the fattest of us will get thinner - pictures of famines attest to that. What does appear to be true is that we are all built differently and the challenge to control weight can be greater for some than for others. Some people are more likely than others to become obese but it can still be controlled. It is recognized that this can be difficult.

Obesity has become an epidemic in the Caribbean. There was an Inaugural Caribbean Obesity Forum in January 2012 to commence a Caribbean wide approach to this issue. There is no reason to suppose Montserrat is different, and a recent survey to assess the level of overweight and obesity in children on Montserrat currently estimates that 23% of children are overweight or obese. (*Overall report on Obesity Screening 2012; V Brown - Montserrat*) Obesity is the leading, and arguably the single most significant health problem in Montserrat today. Obesity is the underlying cause of most of the diabetes and heart disease and much of the hypertension which in turn may lead to stroke, heart attack or cardiac failure. Obesity is also associated with some cancers, especially breast and bowel cancer.

Other lesser areas of concern include chronic respiratory disease as a major cause for hospital admission along with, in mental health, substance abuse. (*73 In-patient admissions cases related to alcohol consumption*). Alcohol is also a cause of obesity and represents "**empty calories**" i.e. food which is of no value to the bodies needs.

Some simple facts:

- For every 1 kg of weight loss the blood pressure reduces by 1 point for the systolic and diastolic readings (*top and bottom readings*) J.E. Netter et al Influence of weight reduction on blood pressure. (*A meta analysis of randomized controlled trials Hypertension 2003 42 e-publication cited in Bandolier*).
- The expectation of life of an obese person (ie a BMI of 30 or more) is reduced by 6-7 years.

- The chance of a non-obese person becoming diabetic in their life time is 2 per thousand.
- The chance of an obese person becoming diabetic is three and a half to nine times that of a normal weight person. (*Prevalence of obesity, diabetes and obesity related risk factors, 2001 Mokdad A et al JAMA January 1, 2003-Vol 289, No.1*)
- The chance of being diabetic if you are overweight (BMI over25) is two and a half times that of a normal weight person.
- The chance of an obese person having raised blood pressure is between three and a half and seven times that of a normal weight person. (*Mokdad A et al JAMA January 1, 2003 Vol 289,No.1*)
- The chance of an obese person suffering from Arthritis is up to 4 times that of a normal person. (*Mokdad A et al JAMA January 1, 2003 vol.1*)
  The chance of an obese person having breast cancer is 2.5 times that of a light woman - BMI less than 22.6. (Obesity, body size and risk of postmenopausal breast cancer) (The Womans' Health Initiative, Morimoto et all cancer causes and control Vol. 13 No 8., 741-751)

Obesity is the "Elephant in the living room". In Montserrat everyone knows it's there but few at present are saying that it is a really big problem requiring a range of long and medium term solutions.

7.3 Exercise

Weight gain and loss is largely determined by the difference between the energy of foods eaten and the energy expended through keeping the body going and exercise. Put simply, if we eat too many calories we will gain weight; if we eat less than we need we will lose weight. Hence, if you are overweight you need to eat less than you need (which usually means you will feel hungry).

Sixteen years ago the American Heart Association made a statement on Exercise which is still relevant. This statement pointed out that exercise:

- Prevents heart disease and in those with established heart disease, its progression;
- Helps control blood cholesterol;
- Lowers blood pressure;

*Statement on Exercise, benefits and Recommendations for Physical Activity Programs for all Americans. Circulation 1996: 94:857-86*2

In the UK it is also pointed out that exercise:

- Is as beneficial in mild depression as medication (and can be prescribed)
- Can help to prevent osteoporosis (brittle bones in the elderly)
- Reduces the chance of both colon and breast cancer.
- Helps sleep and assists in relieving stress.
- Assists in weight control.

- Assists in the prevention and progression of diabetes.
- Reduces the overall risk of premature death by 30%.

Exercise should consist for:

- Children under 5 three hours spread throughout the day.
- Ages 5-18 years vigorous exercise 60 minutes a day, daily.
- Adults less than 65 years - 30 minutes a day five days a week.
- Adults over 65 any exercise especially that which improves flexibility and balance, e.g: Yoga

Exercise should, if moderate, increase the heart rate and make the person mildly sweaty.

There are a range of solutions around exercise and eating - all of them difficult and pose a challenge personally and governmentally. The benefits are clear. At a personal level we need to adjust our eating and social patterns so that portion size is less and the balance of foodstuffs reflect healthy nutrition with less consumption of fats and meats and a greater consumption of vegetables including root crops, all within a reduced portion size.

We need to moderate our alcohol intake so that the "**empty calories**" which merely add weight and are not nutritious, are reduced.

We need to reduce our dependence on soft carbonated drinks - "**sodas**'.

We need to recognize that even fruits need to be eaten in moderation due to the sugar content. In a good mango season, like this year (2011), there can be a lot of mango eating. A moderate sized mango may amount to 130-170 calories, too many will lead to weight gain, even though the fruit is nutritious.

We need to recognize that being hospitable does not require over-feeding a guest. Not having additional helpings should not mean the food is rejected or not liked.

We need to stop eating snacks or eating between meals.

We need to ensure we eat breakfast (if we don't eat breakfast we are likely to eat more later) but, take care, some cereals are bad news with a high sugar content!

We need to look at the label for hidden sugar, it occurs in funny places like ketchup, some salads especially the dressings, yogurt and bread. It's not always called sugar on the label, it can be called fructose, corn syrup, honey and a whole host of other names, but it is still sugar!

We need to exercise more. This includes walking, dancing, getting up and moving around at work, cycling, playing with children and gardening. In short, anything which gets a person moving. The more vigorous the better! Many people are already walking in the morning and evening on the island, they are to be congratulated as forerunners. I hope to see more widespread activity.

7.4 Response

7.4.1 At The Ministry level

We need to ensure:

- that the message on healthy eating and exercise is well understood and properly resourced.
- the message is meaningful and applicable to people in Montserrat.
- that people understand the consequences of obesity.
- the parents understand that the overweight child is an unhealthy child and that he/she must exercise more and/or eat less.
- that people understand the detail of what they are eating if they are buying and eating processed food.
- an appropriate survey is undertaken to identify the risk factors associated with NCDs in Montserrat and use the findings as a basis for further policy in prevention and treatment of NCDs.
- that the exercise message is clear, relevant and possible; being clear that it is much more than going to the Gym. There is a Green Gym outside!

7.4.2 At Central Government level:

We need to:

- regulate the sale of sodas (differential taxation can bring in much needed revenue! Surely an attractive proposition!;
- co-ordinate our response to the food industry locally, again by requiring differential taxation on selected processed foods;
- co-ordinate our response between ministries to stimulate appropriate local healthy agriculture;
- further co-ordinate our response to healthy eating in schools. This needs to include dealing with food sources next to the school gate.
- increase the duty on alcohol.
- create an environment which helps exercise by making walking areas safe and encourage sport among adults as well as children
- establish a National Nutrition Council to oversee the response to unhealthy eating and stimulate the taking of increased exercise.

7.5 Salt

Salt has been implicated in the development of hypertension. Unfortunately salt is a major component of most pre-cooked and processed foods, used both for taste and to assist in preservation. Most salt is ingested as part of processed foods but many of us add significant amounts for taste to foodstuffs. The current recommended intake of salt is six grams or 1 teaspoonful (*NHS Choices*). Much salt is eaten as part of processed or pre-cooked food, hence it is necessary to be clear about the amount of salt ingested by looking at the label.

High salt foods contain more than 1.5% salt by weight. These include:

- Cheese
- Ham
- Pickles
- Prawns
- Salted and dry roasted nuts
- Salt fish
- Stock cubes
- Soy sauce
- Yeast extract

There are others. Some foods have a variable amount of salt; these include:

- Breakfast cereals
- Bread/Bread products
- Pizza
- Pasta sauces
- Crisps
- Tomato ketchup, mayonnaise and other sauces
- Many prepared foods e.g. canned products /bottled products precooked meats including
- Sausages.

Children under the age of 11 should have less than 1 teaspoonful of salt a day from all sources.

Crisps, chips and similar snacks are not good food for children.

The first step is to stop adding salt to food, and the second step is to check the label on food including breakfast cereals to ensure they are not high salt.

Children with too high salt intake are more likely to get blood pressure later in life.

In Montserrat the management of obesity and salt intake should be the major part of the work of a Food and Nutrition Council.

8. PAST RECOMMENDATIONS AND REVIEW OF PROGRESS.

Reading back over past reports has been a concerning experience. I am going to enumerate some of the recommendations of my predecessors, and others, and will then make some comment.

In 2000, the then CMO, Dr Gordon Avery wrote a paper called "The Real Health Problems of Montserrat". He identifies these as Heart disease and stroke, hypertension, diabetes, respiratory disease and asthma, cancer, injuries and sexually transmitted diseases including HIV/AIDS. The list is the same now but looking at Dr. Avery's report 1998/9 shows that the situation has progressed.

Cases of Diabetes and Hypertension Montserrat 1998/9

Condition	**New cases Jan-May 1999**	**Existing cases May 1999**
Diabetes	4	69
Hypertension	11	184
Diabetes and Hypertension		77

Table 7

The population in 1998 was less than today and probably very different immediately after the early volcanic explosions, but it can be seen that there was a problem all those years ago and there has been limited focus on these conditions over the past decade, or more.

Dr Avery's recommendations at that time included:

- *Identify preventable factors for death from heart disease*

  No Action

  A survey is planned for 2013/14 to address this, to be funded by the Hospital Development and Healthcare Improvement project.

- *A careful review of all treatments of hypertensive disease*

  This has been undertaken by the Senior Medical Officer (SMO)

- *Set up a diabetic steering committee*

  The Diabetes Association is in place as yet there is no MOH Steering Committee.

- *Set up a diabetic Register and use it for regular monitoring of diabetics with eye problems, circulatory problems and kidney failure*

Monitoring is undertaken, but there is no central register. It is intended to set this up in the next 2 years through the Hospital Development and Healthcare Improvement Project. (HDHI)

- *Raise public awareness about diabetes*

  This is being done but has a long way to go, there will be increased emphasis as part of the Hospital Development and Healthcare Improvement Project (HDHI)

- *Make serious efforts to modify lifestyle factors*

  Little has been done systematically in this area, but within the HDHI there is a budget for this purpose

- *For respiratory disease the recommendations included 'Careful surveillance of attendance at Clinics'*

  No Action

  This will be achievable with and electronic information system and spirometry, both components of the forthcoming HDHI

- *Ensure asthma patients get treatment according to CHRC guidelines*

  These have been disseminated by the Senior Medical Officer

- *Be alert for the diagnosis of silicosis*

  No Action

  Clinicians are aware, but this maybe a less significant issue than was initially considered. There is a need to put in place arrangements for high risk groups such as sand-miners, builders, gardeners, etc.

- *Carry out regular smoking prevalence surveys*

  No action. The first survey will be carried out in 2013 as part of the HDHI

- *Screening for cancer showed that most sexually active women were not getting regular smears.*

  Partial response. Smears are done, but expensive. The register needs to be improved as call recall is weak. This will be covered by the health information system in the HDHI.

- *There is a good case for screening for colon cancer*

  No action

- *Screening for prostate cancer is to be largely avoided until better screening tests are available*

  Some public pressure for this despite weak scientific basis. It is subject to technological creep, i.e, there is a range of tests including the PSA that may be used more than merited from the scientific base.

- *Introduce a comprehensive cancer education and awareness programme to encourage early attendance*

  No concerted action some of this will be addressed under the HDHI programme

- *Draw up protocols for cancer treatment and palliative care*

  No Action

- *Establish a mini cancer registry*

  No Action

  Should be possible with the introduction of an electronic information system (HDHI)

- *Use a computerized call recall system for cervical cancer*

  No Action

  Should be possible with an Electronic Information System (HDHI)

- *No mammography to be introduced*

  Not introduced but a high profile programme for mammography to be undertaken off island. It is important there are clear criteria for entry into a SCREENING programme and there are clear explicit quality controls for the identification of those incorrectly diagnosed as having cancer(false positive) and those incorrectly diagnosed as being cancer free(false negative)results in place within it.

- *Casualty Department should play its part in accurately recording and reporting on domestic violence and child abuse*

  Some reporting of sexual abuse may occur, but reporting of sexual activity under the age of 16, and 12 and under, appears to be variable. Other forms of abuse - physical, emotional and neglect appear not to be routinely reported to Community Services (now Social Services). At present there is a major initiative in progress in this area.

- *For Sexually Transmitted Diseases (STDs); A full bacteriology service set up*

Not available

- *Confidential records should be made on STDs*

  No Specific arrangements

- *Minimal contact tracing should be started when appropriate*

  No systematic action, activity in private practice is unknown.

- *Annual reports should be prepared on STDs*

  Undertaken

- *Widespread use of condoms seriously considered.*

  Undertaken

Some of *D. Avery's* recommendations have been implemented in a systematic and robust way. In some cases, I have heard more people favoring screening for prostate cancer than colon cancer, although the arguments in favor of the Prostate Specific Antigen (PSA) test as a screening tool are poor but the argument for screening the stool for blood to diagnose cancer of the colon is more powerful.

Child health in 2000 was considered having good surveillance and 100% immunization coverage, but Dr Avery went on to raise the main problems in children are the issues people do not want to know about. These include:

- *Poor nutrition through eating excessive fatty and sweet foods. He identified a small number of children who were overweight.*

  This remains and may have deteriorated

- *Child abuse was described as real and serious.*

  This remains and is only now being addressed

- *Violence between young people.*

  This remains and does not appear to be been addressed on a multi-agency basis.

Dr. Avery's concerns about the social and psychological well-being of children reflected the view that programmes focused on the physical wellbeing had been overtaken by a broader social and psychological concern as well as the physical wellbeing of the child. This is being addressed in Montserrat. This position is endorsed in (The Child Health Surveillance handbook- Third Edition 2009- Hall D, Williams J and Elliman E, Radcliffe Publishing)

Other issues identified by *Dr Avery* remain

- *For the elderly; Appointment of an Occupational Therapist and Physiotherapist*

There is no Occupational Therapist in place and the Physiotherapist requires further training.

- *Set up a comprehensive eye service*

  An outpatient service is in place.

- *For dentistry, set up a Government dentist in St John's Clinic*

  This is in place.

- *For the hospital*

  Build a new operation room

  Completed

Avery J G. The Real Health Problems of Montserrat 2000

Five years later ***Dr. Caroline Mawer*** wrote a report on her anxieties arising out of her visit to help with the 5-year strategic plan. She raised specific issues on:

- *Patient safety*

  Still a concern being addressed at the present time this year

- *Infection control*

  Remains a concern, but a practical workshop has taken place with the help of the Caribbean Epidemiology Centre (CAREC) in March 2012

- *Resuscitation and emergency care*

  Training is in place but is at present Ad Hoc

- *Basic in-patient care*

  This will be addressed under the forthcoming HDHI

- *Incident reporting and care planning for the vulnerable*

  This has been addressed by the VSO and being implemented

- *Confidentiality*

  Policies on this are being reviewed and confidentiality will be addressed as part of the Electronic Health Information System (HDHI)

- *Emergency preparedness*

This is undertaken for Volcano and Hurricanes. A Mass Casualty exercise was undertaken in 2011. This should be undertaken annually, at least as a desktop exercise.

- *The need for clinical governance*

  This was initiated by Dr. Olufemi Dipeolu (see below)

  - Many of the issues were at that time considered long standing
  - A range of initiatives were started with identified leads including
  - A process for emergency care and resuscitation and overseas referral
  - This is weak and continues to need strengthening

- *A routine for checking emergency equipment and supplies*

  This is done

- *A new critical care area agreed and partially equipped in the recovery area*

  This forms part of the HDHI new hospital build and re-equipping

- Basic life support to be repeated annually

  Currently done less than annually, but not repeated on a regular basis on the clinical areas

- *New contracts for medevac*

  Arrangements in place with local carrier

- *New arrangements agreed that all patients attending casualty should either be seen or spoken to by a doctor(out of hours)*

  No agreement

- *A standardized request system for overseas referral*

  In Place

- *Incident reporting initiated (3 incident reviews were undertaken on island at that time)*

  Reporting occurs. However, it is unclear if this is on each and every occasion and also unclear about what is learnt from the process reviewed by the VSO

- *An infection control lead identified*

  Has been identified and sent for training 2011

- *A lead for the annual review of vulnerable patients identified*

Not in place

- *A plan was made to develop a child protection policy*

  Never acted on; now being developed to include procedures

- *A weekly multi-disciplinary grand round*

  Intermittently reintroduced in 2011; will need to be more firmly embedded. The Senior Medical Officer has agreed to take this forward

- *Improved medical recording in the notes so that all in-patients have the same full clerking as an annual review for vulnerable patients*

  No action. To be subject to clinical audit and the necessary actions. In 2012 a previous audit showed the notes to be of variable quality.

- *A nominated lead on confidentiality and a confidentiality policy established.*

  Being developed

In addition, Dr. Mawer made a range of comments concerning staffing which have been expanded in the 5 year workforce plan from ATOS consulting which include:

- *The need to prioritize service experience over academic courses*

  Unclear if this has occurred but appears to be the case in nursing

- *To adequately finance overseas training of doctors – Continuous Professional Development (CPD).*

  No systematic action; requires a budget for locum cover

Mawer Report Montserrat July-September 2005

There are a number of other reports considering the health services, among them:

- The Final Report for the Rationalization of Health Services In Montserrat, (Government of Montserrat-Accreditation Canada)
- Ministry of Health 3-5 year workforce Plan, (ATOS consulting)
- Consultancy Report on access to health Centers for Residents (Ferdinand 2008)

These reports often include reflections on some of the above comments and make recommendations, but they all place emphasis on the need for structural reform rather than the need to implement policies and procedures already agreed, to develop new policies and procedures where appropriate, to implement lessons learnt overseas at workshops and to change methods of working to become more efficient and flexible. The volunteer from Voluntary Services Overseas (VSO) had as a major component of his brief the addressing of

the way in which the hospital operates. Furthermore, it is planned under the HDHI, recently agreed with DFID, that a major component will be the improvement of service provision in the hospital through new practice.

I stated at the beginning of this section that the review has been concerning. The above list of recommendations reflects 10 years of stuttering development. My predecessor, *Dr Olufemi Dipeolu,* tried to address several of these issues through the Clinical Governance Committee which he established along with its three sub-committees on Quality Assurance, Equipment and Resuscitation. In his handover notes to his unknown successor he states:

> *"Unfortunately, despite the initial enthusiasm, the Clinical Governance Committee has morphed into an almost moribund state as attendance at meetings tend to be poor and meetings do not hold if the CMO is off island despite, there being a timetable drawn up for the whole year. Efforts to make participants take ownership of the committee have faltered.*
>
> *None of the sub-committees have produced any reports and at best may be described as moribund.*
>
> *As part of the all Governance Quality Drive, Clinical Programmes were designed too, but these have suffered a worse fate than the sub committees*
>
> *Audits of clinical notes were done twice and the results were rather disappointing, as this was a reflection that medical officers had lost their most basic clinical skill, which is history taking. In order to address this, a guideline for note-taking has been drawn up".*

9. THE FUTURE

9.1 The Hospital Development and Healthcare Improvement Project (HDHI)

I have been asked by some to set up the clinical Governance committee and its sub committees. I have resisted this for the past year for obvious reasons.

However, we are shortly to be in a new position as far as the hospital is concerned. Over the next four years a new hospital will be built to UK specifications.

The new hospital will prove an inadequate investment unless new practices focused totally on the care and welfare of the patient are taken on board by all staff. The VSO had commenced this process in conjunction with the nursing staff. To this end, the GoM within the HDHI has identified the need for changes in working practice to be lead by the leading institute in the UK for improving services in the NHS and Overseas.

The HDHI will also support a clinical information system which will enable a robust single record for each person on Montserrat and enable registers for NCDs including cancer to be established and care audited.

Many of the recommendations made by my predecessors can be implemented by change of practice and lead by those who have attended workshops, specifically to address the issues concerned. It is necessary for the staff to take ownership and responsibility for the improvement and quality of services.

I have not in this review mentioned several valuable reports advising infrastructure improvement, manpower improvement, training and including important and appropriate recommendations. I have rather identified the need to improve services without improved manning/hospital building/training, and within current resources. This will be the approach which will be used by the NHS Innovation and Improvement Agency. It has been repeatedly shown not least by the Agency itself that improved care is possible without increased resources. To achieve this requires a serious "can do" approach, a willingness to think through difficult problems and to work as a team.

Most of the recommendations proposed by Dr. Avery and Dr. Mawer do not require financial support but do require the real will to change by all staff, and find solutions rather than identify problems. The development of a clinical information system will address the need for NCD registers and address many of the concerns raised about confidentiality. The development and use of electronic records will require learning new skills and putting up with the difficulties inherent in the introduction of any new system. The benefit will be enormous in the end as it will allow a single record for a patient instead of the current multiplicity of records in clinics, casualty and inpatients and facilitate clinical audit and continuous improvement. The addition of new resources does not of themselves improve care. This is done by the staff by changing the way each and everyone works. Each of us has an individual responsibility for the care of each patient.

The system will allow for clinical audits to be undertaken but such audits will be valueless unless followed up by the change identified as necessary. A very good audit was undertaken of diabetic care by Dr Ingrid Buffonge and Ms Grethlyn West (West Indian Medical Journal Supplement Vol. 60 (Suppl. 2 1-64) April 14-16 2011 Oral Presentation #25), which showed that the care of patients with diabetes had considerable room for improvement on the island. It is intended that this audit will form the basis for discussion and improved care within Primary Care through the Primary Care Committee which has recently been established.

It is not the intention of this CMO to make any additional recommendations to those above.

9.2 New Management Arrangements

It is the intention to build on the new management structures developed to implement the recommendation in change in practice identified in the past with the newly established Primary Care Committee, Secondary Care Committee and the groups that support them.

These groups will have the responsibility for implementing the necessary quality improvements to the areas in which they work.

9.3 Professional Leadership

There is an opportunity to address the un-started and un-finished business of the past 10 and more years, but only if all members of the health staff take on the responsibility to develop the service. It is abundantly clear that the intermittent presence of a CMO has not enabled the development of services over the past 10 years, neither in my view is there any evidence that the presence of a CMO will necessarily enable development in the future as the post at best appears to provide two years stability in the MOH. Frequently, the post holder has remained for much less time and on occasions the post has been unfilled. Furthermore many of the tasks are inappropriate to the work of someone based at MoH level. The current development of committee structures at primary and secondary care offer an opportunity for staff to take responsibility for tasks to be undertaken at the operational level in Secondary and Primary Care. These could include:

9.3.1 Primary Care

Manage the delivery of Primary health care programmes

- Identify training needs of primary health care staff in conjunction with the Primary care Management Committee
- Oversee clinical governance in primary care
- Determine and monitor the quality of care
- Establish and maintain links with organizations which relate to primary care especially Civil Society organizations
- Provide, through the appropriate management structure, advice on primary care development to the MOH and Government of Montserrat.

9.3.2 Secondary Care

Through the Secondary Care Management Committee:

- Identify the training needs in secondary care
- Oversee clinical governance in Secondary care
- Arrange for additional services through the Diaspora and elsewhere
- Provide through the appropriate management structure advice on secondary care development to the MoH and Government of Montserrat
- Identify development and equipment needs in each of the functional group areas.

9.3.3 Strategic/MoH

- Strategic planning
- Managerial oversight of primary and secondary care
- Report on the health of the population annually
- Have oversight of the registration process for doctors and make appropriate recommendation for registration to the Government

- Review the legislative context of health and health delivery
- Address the population needs of Montserrat on public health concerns.

These changes would enable the District Medical Officer (DMO) to undertake a clearer and increased responsibility in Primary Care and the Senior Medical Officer (SMO) a greater responsibility in Secondary Care. The need for a doctor to be recruited as CMO is reduced as the tasks at MoH level are not necessarily medical but should be undertaken by a person with a Public Health background drawn from a range of disciplines, including nursing, environmental health, planning and epidemiology. This would require the creation of a Director of Health Services who has a public health background but not necessarily a medical one. A Medical qualification would be an additional qualification rather than a requirement. Among the consequences of such a move would be the need to alter legislation which currently requires the CMO specifically to take on certain legal responsibilities.

The primary vehicle for addressing the needs of the population would need to be addressed through a Multi-sector Non Communicable Disease/Chronic Disease Committee rather akin to the current Multi-sector HIV/AIDS Committee with a supporting technical committee structure.

The initial activities of such a committee would address the issues raised by Dr Avery twelve years ago.

The issues raised by Dr. Mawer five years ago are beginning to be addressed by the Secondary Care Committee and will be further developed in collaboration with the NHS institute for Innovation and Improvement and the Primary Care Committee over the next three to four years. These developments will however only occur with the commitment of all clinical and non clinical staff taking ownership and responsibility for change and to build on the external support which can help catalyzed change but not ensure it is in place.

10. CONCLUSION

Several of the structures necessary to improve patient care are in place. The important next step is to address the issues identified in the past and enumerated above through the strengthening of management in Primary and Secondary Care and the implementation of robust policies carefully monitored and adhered to. Requests for new developments should only be considered in the context of successful implementation and adherence to the implementation of current policies, improvement in Clinical Governance and standard operating procedures.

However, in addition to the structures now in place, it is necessary to address the long term public health issues of hypertension, obesity, respiratory disease and cancer by the development of a multi-sector approach implemented under the auspices of a NCD Committee. The model used to approach HIV/AIDS should be considered.
