HEALTH SYSTEMS AND SERVICES PROFILE OF ANTIGUA AND BARBUDA

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EXECUTIVE SUMMARY

Antigua/Barbuda is a democratic State, with a bi-cameral legislature composed of a Senate or upper House and the House of Representatives or Lower House of Parliament. National planning and the management of development is the responsibility of the Ministry of Planning. A National Strategic Development Plan (NSDP) is in its final stages of development. Responsibility for the generation and management of national social policy is divided between the Ministry of Health and Social Improvement and the Ministry of Labour and Home Affairs. The Ministry of Health and Social Improvement is mandated to formulate health programmes based on Government health policy. The health situation and the delivery of health care is influenced by a number of factors which include Government policy, the size and distribution of the population, the levels of employment, and the inward/outward migration patterns. The country is relatively small and is universally covered by a network of clinics and health centres providing at least basic primary care services. The main barrier to accessibility of quality care is that of language developing due to the high influx of Spanish-speaking immigrants from the Dominican Republic. The main contributors to GDP are tourism, the financial and information sector, such as offshore banking, banking and insurance.

In 2001, life expectancy at birth for the population as a whole is 70.7 years. By sex it is 68.5 years for males and 73.1 years for females. The average annual rate of population growth is 0.7%. The total dependency ratio is 45.5%. The number of live births has decreased from a high of 1,459 in 1996 to 1,329 in 1999, a decrease of approximately nine percent in four years. The crude death rate has remained virtually steady at 6.3 to 6.8 deaths per 1,000 population. Malignant neoplasms have again emerged in 1999 as the main contributor (14.4%) to total mortality. Hypertension diseases (13.2%), cerebrovascular disease (12/8%) and heart diseases (12.0%) continue to be main contributors to total mortality (1999). The infant mortality rate has shown some fluctuations –in 2000 decreased to 16.4. The estimated 1999 mid-year population was 72,670. It is estimated that 25,000 persons or approximately thirty-four (34%) percent of the population lives in the city/urban St. John's.

The Ministry of Health and Social Improvement is the government bureaucracy responsible for the provision of public health services. It provides leadership through regulation and financing to the institutions responsible for the delivery of public health care in the country. There are no intermediate or local government bureaucracies in the country and consequently all public health services are provided from the central level. There is a level of decentralisation at the various levels of care delivery – but this is minimal, all decisions regarding policy, human resources and finance are made at the central level. The private health services sector continues to grow rapidly.

It now consists of a twenty-one bed acute care institution, four private laboratories, at least ten pharmacies, an orthopaedic centre, two group practice medical centres and ten physicians entirely in private practice. All private services are centred in the city – but with the availability of adequate private and public transportation services and a fairly good road network, all are within thirty minutes reach from the furthest geographical point on the island. The private sector tends to provide 'back-up' services to the public sector, especially in times of shortage or equipment failure. The number of physicians has remained constant over the last two years. The majority of doctors and nurses are in the acute care institutions. A hospital drug list/formulary has been prepared and its use is mandatory in the public institutions. The number of generic drugs is three hundred and sixty. It is estimated that the total spending on drugs in the public sector is approximately US$5.00 per capita. All persons suffering from identified pathologies are automatically beneficiaries of the Medical Benefit Scheme and receive appropriate drugs free of cost. There is availability of high technology equipment in both the public and private sector, but services such as intensive care and dialysis are performed only in the public sector. The Ministry of Health and Social Improvement is responsible for the sectoral management of public health services (to include personal health care) and regulating the private sector. The financing of the public health sector is done through the general tax funds managed by the Ministry of Finance, the Medical Benefits Scheme and to a lesser extent, private insurance and the Social Security Fund. User fees play an almost negligible role in the public sector but remain the main source of revenue – along with private insurance – for the private sector. Health services are provided in the areas of maternal and child health care; environmental sanitation, mental health, disability and older persons health, nutrition, diabetes and hypertension, communicable disease control and surveillance, home visitation, cancer screening and referral services.

Presently, there is no health sector reform programme in Antigua and Barbuda. Modifications of the existing health system continue to be slow and incremental and not part of a planned process.

1. CONTEXT

The nation of Antigua and Barbuda comprises the islands of Antigua (17°06′N 61°47′W), Barbuda and the uninhabited island of Redonda. It is at the centre of the Eastern Caribbean's Leeward Islands group. The country is 440sq. Km. in area with Antigua occupying 64% (282 sq. km.) of the landmass and containing ninety-eight percent (98%/71,217) of the 1999 mid-year population (72,670 persons).

1.1 Political Context

Antigua/Barbuda is a democratic State, with a bi-cameral legislature composed of a Senate or upper House and the House of Representatives or Lower House of Parliament. The country is divided into seventeen (17) geopolitical constituencies, one of which is the island of Barbuda. Executive authority is vested in a Cabinet of Ministers, headed by a Prime Minister and comprising twelve Ministers, one of which is the Minister of Health and Social Improvement. Elections are held every five years - the last one was held in March of 1999.

National planning and the management of development is the responsibility of the Ministry of Planning who has the mandate to identify strategies for human resource development and infra-structural development. A National Strategic Development Plan (NSDP) is in its final stages of development and the health sector has provided input into the plan.

Responsibility for the generation and management of national social policy is divided between the Ministry of Health and Social Improvement and the Ministry of Labour and Home Affairs. There is continuous collaboration between both of these Ministries to minimise duplication of services. The main institutions for the management of social policy are: (a) the Social Security Scheme Authority (spouse and retirements benefits, disability, maternity, survivors and death benefits); (b) the Citizens Welfare Division (social development issues including counselling, probation, rehabilitation and programmes geared towards senior citizens); and (c) the Gender Affairs Division (social development issues relating to women's affairs and initiatives).

The Ministry of Health and Social Improvement is mandated to formulate health programmes based on Government health policy. A National Health Planning Committee (chaired by the National Health Planner) that has developed a National Health Plan to cover a five-year period (1997- 2001) leads the planning process. A review of the planning process in the Ministry has been mandated and it is hoped that new approaches will yield better plans and promote stronger implementation strategies.

The health situation and the delivery of health care is influenced by a number of factors which include Government policy, the size and distribution of the population, the levels of employment which determine variables like income and nutrition, and the inward/outward migration patterns.

Government health policy in support of the concepts of equity and universal accessibility dictates that ability to pay should not be a barrier to the access of health services in Government facilities. The country is relatively small and is universally covered by a network of clinics and health centres providing at least basic primary care services. Four new multi-purpose health centres are being constructed through British aid. The full range of primary care services to include medical care and dentistry will be provided in these health centres. Demand remains high for modern procedures and technology in the delivery of care. The assessment by the population of the quality of services is based on television/developed country standards.

The main barrier to accessibility of quality care is that of language developing due to the high influx of Spanish-speaking immigrants from the Dominican Republic in particular. The high level of immigration continues to increase the potential for the introduction of communicable and new/re-emerging diseases but there are no indications that such introduction is taking place.

1.2 Economic Context

Selected Economic Indicators

INDICATOR	YEAR						
	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Per capita GDP in constant US prices	7, 488	7, 942	7, 580	8,016	8,344	8,433	8, 371
Economically active population, in thousands	NA	NA	NA	NA	NA	NA	NA
Total public spending as a percentage of GDP	NA	NA	NA	NA	NA	NA	NA
Public spending on social programs as a percentage of GDP	NA	NA	NA	NA	NA	NA	NA
Annual rate of inflation	2.2	3.0	3.0	2.7	2.2	4.9	5.2

Source: Antigua Government Statistics Division, Ministry of Finance. World Development Indicators database: http://Sima-Ext.worldbank.org
*US$=EC$2.70 (local currency)

The tourism industry maintained its contribution of approximately sixty five percent (65%) of the Gross Domestic Product (GDP) for the 1994-1999 period. The other main contributor to GDP is the financial and information sector, such as offshore banking, banking and insurance. The contributions of other sectors like construction, small business, agriculture (livestock, crop production and fishing) have remained constant over the review period. External financing has more than tripled between 1993 and 1999. However, data on the share of external financing in the total budget income of the public sector is not available.

1.3 Demographic and Epidemiological Context

The reporting and recording of vital statistics (fertility, births and deaths) is considered very accurate. Rates however may vary depending on the variations in the estimates of the mid-year population figures. In 2001 life expectancy at birth for the population as a whole is 70.7 years.

By sex it is 68.5 years for males and 73.1 years for females.[1 2] The average annual rate of population growth is 0.7%. The total dependency ratio is 45.5%.[3]

The number of live births has decreased from a high of 1,459 in 1996 to 1,329 in 1999, a decrease of approximately nine percent in four years. It is difficult to identify any single contributor to this decrease, but the increase in HIV/AIDS education with its condom or abstinence message may be a major contributing factor. In addition, it is estimated that approximately fifty births to Antiguan/resident women take place annually outside of Antigua. Children and mothers are then seen in clinics after return to Antigua, but this is not a new practice. These numbers have never been included in the live birth statistics. The total fertility rate among women 15-44 years of age is approximately 48 percent.

	YEAR							
	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Crude birth rate	NA	19.1	19.9	21.3	20.8	19.1	18.3	19.5*
Total fertility rate	NA	NA	NA	NA	NA	48.4	48.4	2.3*
Crude death rate	NA	NA	6.7	6.3	6.6	6.4	6.8	5.9*
Maternal mortality rate	NA	NA	1.5	0	.7	0	0	NA
Infant mortality rate	NA	NA	17.1	25.4	14.5	12.5	21.1	16.4

Source: Health Information Division, Ministry of Health, Antigua, 2001; *These figures are for the year 2001. PAHO. Health Situation in the Americas: Basic Indicators 2001 http://www.paho.org.sha.

The crude death rate has remained virtually steady at 6.3 to 6.8 deaths per 1,000 population although fifty more persons (~11%) died in 1999 than 1998. Only four maternal deaths have occurred between 1991 and 1997, none in 1998 and 1999. There is a steady rise in the percentage of deaths from infectious and parasitic diseases over the last four years. Deaths from HIV/AIDS account mainly for this increase. The number and percentage deaths (15%) from tumors and deaths from diseases of the circulatory system (40%) have remained constant over the period under review.

Malignant neoplasms have again emerged in 1999 as the main contributor (14.4%) to total mortality. Hypertension diseases (13.2%), cerebrovascular disease (12/8%) and heart diseases (12.0%) continue to be main contributors to total mortality (1999). Diabetes mellitus and accidents/injuries contribute 6.9% and 6.7%, respectively.

The infant mortality rate has shown some fluctuations – a low of 17.1 per 1000 live births in 1995 to a high of 25.4 the following year. It reached a low in 1998 of 12.5 only to skyrocket in 1999 to 21.1. However, in 2000 decreased to 16.4. Most of these deaths occurred in the first week of life. The main cause of infant mortality is prematurity (certain conditions originating in the

perinatal period). In 1999, sixty-seven of the one hundred and fifty three infant deaths - 44% - were attributed to this cause. Other causes that are certainly not as significant, are congenital anomalies and pneumonia.

PERCENTAGE DISTRIBUTION OF DEATHS BY AGE AND CAUSE

	1996		1997		1998		1999	
Groups	**No. deaths**	**%**	**No. deaths**	**%**	**No. deaths**	**%**	**No. deaths**	**%**
Total	462	100	429	100	457	100	509	100
Under 12 months	37	8.6	21	4.6	17	3.7	28	5.5
1-4 years	4	0.9	5	1.1	2	0.4	4	0.8
65+	251	58.5	294	63.6	304	66.5	330	64.8
Symptoms and ill defined conditions	15	3.50	25	5.4	16	3.50	19	3.7
Infectious and Parasitic Disease* including HIV/AIDS	10	2.42	20	4.5	17	3.8	22	4.5
Neoplasms	79	19.1	71	15.3	74	16.8	74	15.1
Diseases, Circulatory system	167	40.3	187	40.4	180	40.8	194	39.6
Accidents/Injures	16	3.86	32	6.9	36	8.2	34	6.9

Source: Health Information Division, Ministry of Health, Antigua, 2001.

FIVE LEADING CAUSES OF MORTALITY

	1997		1998		1999	
	Rank	**Rate**	**Rank**	**Rate**	**Rank**	**Rate**
Malignant Neoplasms	**3**	9.73	**2**	9.64	**1**	10.1
Cerebrovascular Disease	**1**	11.2	**3**	9.1	**3**	8.94
Heart Diseases	**2**	10.0	**1**	10.7	**4**	8.39
Diabetes Mellitus	**7**	3.15	**5**	5.03	**6**	4.82
Accidents/Injuries	**5**	4.58	**5**	5.03	**7**	4.68
Hypertensive Disease	**4**	5.58	**4**	5.31	**2**	9.22

Source: Health Information Division, Ministry of Health, Antigua, 2001.

No cases of cholera and/or malaria have been reported in Antigua and Barbuda during the reporting period. Only five dengue cases have been confirmed in the last two years (98/99). There was an outbreak of chicken pox in 1999 when four hundred and three (403) cases (55.46 per 10,000 population) were identified. There were a total of seven cases of tuberculosis reported in 1998/9. There were no new cases of leprosy reported. Since records were begun in 1985 to 31st March 2001 for HIV/AIDS, a total of two hundred and seventy-one persons have been

diagnosed as HIV positive. Out of this number, seventeen have been children. The definition of 'child' in the AIDS Secretariat is anyone between the ages of zero to thirteen (0 - 13) years. In the age group of fifteen to nineteen (15 - 19) years, a further thirteen HIV positive cases have been diagnosed in the same period. In 1999, for the first time since 1996, more women (23) tested positive than men (19) and the two children who also tested positive were female.[4] A total of one hundred (109) - 76 male, 24 female and 9 children (0-13yrs) - of the two hundred and seventy-one (271) persons diagnosed as HIV+, have acquired AIDS/HIV-related-illnesses and of this number eighty-five (85) deaths have occurred.

The most recent alcohol and other drug use study, conducted in 1991, showed that the use of crack cocaine, cocaine, marijuana and alcohol abuse were causes for concern especially among the young. Without figures to support the position, it is however suggested that the use of crack cocaine and cocaine is abating. Alcohol and marijuana remain the drugs of choice and therefore of public health concern.

1.4. Social Context

The estimated 1999 mid-year population was 72,670. It is estimated that 25,000 persons or approximately thirty-four (34%) percent of the population lives in the city/urban St. John's with another 16,000 persons live in rural St. Johns. [5]

The last population census, taken in 1991, indicated an ethnic breakdown of the population as ~ ninety-one percent (91%) of African origin, 3.7% mixed and 2.36% white. Small but growing groups of people of Syrian, Lebanese, Chinese, East Indian and Portuguese extraction also are among the population. Preparations are presently being made to conduct a census in 2001.

Antigua and Barbuda has a free and compulsory system of education for children 5 -16 years. The latest literacy survey (1993) found 15.6% (14.3 among females and 17.7 among males) of the adult population was illiterate.[6]

There are no accurate indicators of poverty levels in the country although a number of poverty studies have been conducted over the years. Appropriate authorities have not validated the results. Income distribution statistics are not available.

The official unemployment rate was 7.6% in 1998 rising from 7.0% in the two previous years. An informal unemployment rate is estimated to be at least twice as much and like the official rate, it is expected to increase in the coming years as hotels and business reduce staff and depend on part-time or short-term employment to fill specific needs. The tourist industry has also suffered from hurricane damage and declines in stay-over visitors. Employment opportunities in that sector have been decreasing also.

2. HEALTH SERVICES SYSTEM

2.1 General Organisation:

Public Institutions. The Ministry of Health and Social Improvement is the government bureaucracy responsible for the provision of public health services. It provides leadership through regulation and financing to the institutions responsible for the delivery of public health care in the country. The Government bureaucracy is organised according to the British Westminster model, a model that is common in most of the former British colonies in the Caribbean – now all members of the Caribbean Community (CARICOM). A Minister who is a member of the governing Cabinet heads the Ministry. Administrative authority is delegated to the Permanent Secretary who along with a core of professional, technical and administrative staff, direct the Ministry. The Chief Medical Officer is the main technical advisor to the Ministry and has responsibility for the coordination of the health services delivered in the public hospitals and clinics.

There is no intermediate or local government bureaucracies in the country and consequently all public health services – as other social services - are provided from a central government level. There is a level of decentralisation at the various levels of care delivery – but this is minimal, and all decisions regarding policy, human resources and finance are made at the central level. Many times such decision-making is done outside of the Ministry of Health and Social Improvement, such as in the Ministries of Finance or Public Works.

Private Institutions. The private health services sector continues to grow rapidly. It now consists of a twenty-one bed acute care institution – the Adelin Clinic, four private laboratories, at least ten pharmacies, an orthopaedic centre, two group practice medical centres and ten physicians entirely in private practice. The other doctors would hold appointments with the government either as consultants in the lone acute care hospital or as district medical officers responsible for the delivery of primary (and limited secondary) care in the various medical districts.

All private services are centred in the city – but with the availability of adequate private and public transportation services and a fairly good road network, all are within thirty minutes reach from the furthest geographical point on the island. The private sector tends to provide 'back-up' services to the public sector, especially in times of shortage or equipment failure. Most 'high-tech' services such as CAT scanning and mammography are only provided in the public sector.

No marked changes have taken place to the colonial model for the health services development – although there have been minor adjustments. Be that as it may, the system has been maintained virtually intact through the eighteen years of Independence. There are a number of models under

consideration but it continues to take time to garner political support to face the challenges of reorganisation. A public sector reform process is being actively considered in the Ministry of Planning and this reform strategy may propel the necessary changes in the health sector.

2.2 Health System Resources

Human Resources. The number of physicians has remained constant over the last two years. Figures do not reflect the difficulty of attracting and maintaining nurses in the public institutions. The majority of doctors and nurses are in the acute care institution. Administrative staff is at minimum levels in all institutions.

HUMAN RESOURCES IN THE HEALTH SECTOR

TYPE OF RESOURCE	YEAR						
	1993	1994	1995	1996	1997	1998	1999
Ratio of physicians per 10,000 pop.	NA	NA	NA	7.3	10.6	10.3	10.5
Total number of physicians	NA	NA	51	53	74	74	76*
Ratio of nurses per 10,000 pop.	NA	NA	NA	33.9	32.7	33.9	33.2
Total number of nurses	NA	NA	218	218	219	218	219
Ratio of dentists per 10,000 pop.	NA	NA	NA	NA	NA	NA	NA
Ratio of mid-level laboratory technicians per 10,000 pop.	NA	NA	NA	NA	NA	NA	NA
Total number of medical lab technicians	NA	NA	7	12	5	12	12
Ratio of pharmacists per 10,000 pop.	NA	NA	NA	NA	NA	NA	NA
Ratio of radiologists per 10,000 pop.	NA	NA	NA	NA	NA	NA	NA
No. of Public Health graduates	NA	NA	3	3	4	3	3

Source: Statistical Division, Ministry of Health, 2001. *50 are in public sector, 23 in private practice and 26 in private practice only; figure for 1995/6 are for public sector only.

HUMAN RESOURCES IN PUBLIC INSTITUTIONS, 1998

Institution	Type of Resource					
	Physicians	Nurses	Nursing Auxiliary	Other workers	Administrative Personnel	General services
Holberton Hospital	42	136	85	NA	30	NA
Mental Hospital	3	7	22	NA	5	NA
Geriatric Hospital	0	6	22	NA	4	NA
Total	45	149	129	NA	39	NA

Source: Antigua and Barbuda estimates 1998.

Drugs and other Health Products. A hospital drug list/formulary has been prepared by the National Formulary Committee. Its use is mandatory in the public institutions. The number of generic drugs in the existing hospital formulary is three hundred and sixty (360). It is estimated

that the total spending on drugs in the public sector (wholesale price for 1998) was US$382,500.00 or approximately US$5.00 per capita. There was no information available on total national retail spending on drugs.

INDICATOR	1993	1994	1995	1996	1997	1998	1999
Total n° of registered pharmaceutical products	NA	NA	NA	NA	NA	360	NA
Percentage of brand-name drugs	NA	NA	NA	NA	NA	NA	NA
Percentage of generic drugs	NA	NA	NA	NA	NA	NA	NA
Total spending on drugs (selling price to the public)	NA	NA	NA	NA	NA	NA	NA
Per capita spending on drugs (sale price to the public)	NA	NA	NA	NA	NA	$5.00	NA
Percentage of public spending on health allocated to drugs	NA	NA	NA	NA	NA	NA	NA
Percentage of the expenditure executed by the ministry of health for drugs	NA	NA	NA	NA	NA	NA	NA

Source: Statistical Division, Ministry of Health, 2001.

All persons suffering from identified pathologies (cancer, hypertension, diabetes, sickle cell anaemia, mental illness, glaucoma, leprosy, cardiovascular diseases) are automatically beneficiaries of the Medical Benefit Scheme and receive appropriate drugs free of cost to them. The Medical Benefits Scheme is funded by mandatory salary deductions of all employed persons. The contribution is matched by a similar percentage (3½%) from their employers. All persons who contribute to the Scheme are beneficiaries along with those who have been diagnosed with stipulated pathologies whether they contribute or not. Beneficiaries receive drugs free of cost to them. Persons in age groups 0-16 years and 60+ years receive drugs through the health centres or hospital pharmacy free of cost also. The prevailing regulations under the Pharmacy Act require the presence of a pharmacist in private pharmacies and/or any other health facilities dispensing drugs.

Equipment and technologies

AVAILABILITY OF EQUIPMENT IN THE HEALTH SECTOR, 1998

SUBSECTOR	Type of Resource			
	Countable beds (Acute care)	**Clinical laboratories**	**Blood banks**	**Radiodiagnostic equipment**
Public	135	1	1	NA
Private	21	3	1	NA
Total	156	4	2	NA

Source: Statistical Division, Ministry of Health, 2001.

There is availability of high technology equipment in both public and private sector but services such as intensive care and dialysis are performed only in the public sector. Equipment

maintenance continues to be a major challenge especially in the public sector where inadequate budgets and poorly trained maintenance staff contribute to the problem. Only approximately 1.4% of the operating budget of the main public hospital was dedicated to maintenance of equipment in 1998.

2.3 Functions of the Health System

Steering Role. The Ministry of Health and Social Improvement is responsible for the sectoral management of public health services (to include personal health care) and regulating the private sector. The Central Board of Health, a division of the Ministry, is responsible for the management of environmental health. Public health functions are defined in the Public Health Act and its numerous regulations, but most legislation in the sector is in dire need of revision and updating. The regulatory role is presently very weak, legislative frameworks are outdated and lacking in relevance. There are only nominal mechanisms for the regulation of private health care providers and virtually none for the regulation of private health insurance.

The financing of the public health sector is done through the general tax funds managed by the Ministry of Finance. An additional and important source of funds for the financing of health care is the Medical Benefits Scheme and to a much lesser extent, private insurance and the Social Security Fund. User fees play an almost negligible role in the public sector but remain the main source of revenue – along with private insurance – for the private sector. The levels of financing by donor agencies continue to diminish and now virtually have no impact except in the area of manpower development.

The National Health Planning Committee headed by the National Health Planner is mandated to develop and monitor the coordination and implementation of health plans, programmes and projects within the Ministry of Health. A draft national health plan has been developed but it is yet to be cost and accepted as a national document. The draft plan calls for a definitive Health Sector Reform process.

Intersectoral collaboration is encouraged and promoted between government, non-governmental and private institutions for health programmes and initiatives. This is mainly achieved through the establishment of joint action type committees, such as the National Advisory Committee on HIV/AIDS or the National Food and Nutrition Committee.

The Health Information Unit (HIU) is responsible for collection and processing of data and the dissemination of health information. Notification of identified communicable diseases is compulsory within the health sector. The HIU is now producing timely information and with improved reliability, there is increased incentive to use the available information in decision making.

The Establishment Division within the Ministry of Planning is the department responsible for national human resources management, but training policy development, recruiting and training are done at ministerial and departmental level. The Ministry is responsible for regulating and controlling the practice of health professionals in the country. These efforts are implemented through a number of Ministry/Minister appointed agencies such as: (a) the Medical Registration Board that deals with the registration and practice of medical doctors, dentists and optometrists/opticians. There are no provisions for the registration of other categories such as chiropractors, podiatrists, psychologists and naturopaths; (b) the CARICOM Regional Nursing Body is responsible for the assessment of nurses through regional examinations but at the national level, the Nursing Council controls the registration of registered nurses and nursing assistants; (c) the Midwifery Board is a separate regulatory body for the registration of midwives. All midwives are registered nurses with post-basic training in midwifery. Traditional birth attendants are not recognised by the official system; and, the Pharmacy Council is responsible for the regulation of the training and practice of pharmacists and the control of the operation of pharmacies – private and public.

There is no accreditation for health facilities in place. There are also no public or private agencies devoted to health technology assessment. The preparation of clinical practice guidelines is done on a department/division basis.

Financing and Expenditure. The Ministry of Health through allocations from the Ministry of Finance finances all public health care. The Medical Benefits Scheme, a main contributor to this financing, is a statutory authority within the Ministry of Health. There is no available information on private sector health expenditure. Actual Government health expenditure has increased gradually over the six years under review although the level of expenditure as a percentage of the national budget has virtually remained constant at 12.7 – 13.95%. Health expenditure per capita has increased steadily and stands at US$755 in 1999. Health expenditure as a percentage of GDP peaked in 1996 at 3.77% but has fallen to 3.46% in 1997. The Government is in the process of building a new 180 state-of-the-art acute care hospital and unless there are cuts in primary care expenditure, which is not a defensible policy option, it is expected that the cost of providing health care will continue to rise over the next five years.

	1993	1994	1995	1996	1997	1998	1999
Per capita public expenditure on health (in US$)	NA	NA	NA	NA	NA	NA	NA
Public expenditure on health /total public expenditure	NA	NA	7.8	7.6	7.9	7.2	7.7
Total per capita health expenditure (in US$)	NA	NA	611	632	667	727	755
Total expenditure on health as a % of GDP	NA	NA	3.1	3.8	3.5	NA	NA
External health debt /Total external debt	NA	NA	NA	NA	NA	NA	NA

Source: Health Information Division, Annual Statistical Digest, 2000.

There is no reliable information on the levels of coverage and financing afforded by the private insurance sector. Estimates for Government contribution to overseas treatment for specialised care are not available. The Medical Benefits Scheme covers most of such treatment. All indications are that both volume and cost of treatment are significant in relation to national expenditure. The Planning Unit continues to estimate the levels of financial activity of private insurance companies and further define and determine their present role in the financing of the health sector generally. There is little cooperation from the private sector to provide these figures and there are no regulatory mechanisms for insisting that the figures be provided to Government agencies.

The Government budgetary expenditure by Agency, extrapolated to approximate levels of care, reveal that in 1999, approximately 38% of the budget was spent on secondary and tertiary care and essentially the same percentage was spent on primary care (to include environmental health). The percentage spent on primary care decreased from 48% in 1997. It is important to note however that only approximately 13% of the budget is spent on direct personal primary health care – tabulated as 'Medical General. The figures for the Central Board of Health reflect expenditures relating to solid and liquid waste management, street cleaning, water quality, meats and other foods surveillance etc.

PUBLIC HEALTH SECTOR EXPENDITURE BY INSTITUTION AND LEVEL OF CARE (in US$)

Institution	Level of Care	1998	1999
Ministry of Health, Central level		3,300	1969
Total Administration	Administrative	**3,300**	**1969**
Medical General*		3,195	4,629
Central Board of Health		11,426	5,550
Total Primary Level	Primary	**14,621**	**10,179**
Holberton Hospital		7,869	8,654
Mental Hospital		783	1,018
Total Secondary/Tertiary Level	Secondary/Tertiary	**8,652**	**9,672**
Other – Includes Fiennes Institute		**1,034**	**1,677**
TOTAL		**27,607**	**23,497**

Source: Health Information Division, Annual Statistical Digest, 2000.

Resource allocation continues to favour high technological intervention in the acute care institution and although there are renewed efforts to strengthen primary health care and encouraging private sector involvement, the trend will be to see more money spent on

institutional care. The construction of a new two hundred-bed hospital will dictate a shift of resources to institutional care - health policy statements notwithstanding. The facility is expected to be completed in 2002.

Insurance. Health authorities have no information on the levels of coverage and forms of delivery of the public health insurance schemes. There is neither reliable nor timely information on the private sector. The Public Health Act requires Government institutions to provide health care free of cost at the time of delivery to all persons below sixteen (16) years of age and all persons over sixty-five (65) years. This care is generally delivered in the district clinics/health centres or the single acute care hospital.

All employed persons are mandated by law to become beneficiaries of the Social Security Scheme and the Medical Benefits Scheme. Contributions to both schemes are based respectively, on a two-point-five (2.5%) and three-point-five (3.5%) percent deduction from the salaries of all employees. Employers match the contributions of each employee. In addition persons become beneficiaries of the Medical Benefit Scheme regardless of age or employment status so long as they are certified to be suffering from any of the chronic diseases – hypertension, diabetes, cancer, cardiovascular disease, mental illness, glaucoma, asthma, leprosy and sickle cell anaemia. There are two gaps in the coverage. Youth over the age of sixteen who are not employed are not covered under any of the provisions; and self-employed persons over sixteen but under sixty-five are not eligible to become beneficiaries of the MBS even if they so desire. These gaps are presently being addressed.

The benefits from the various schemes are as follows: (a) Social Security scheme benefits include grants for disability and retirement, and funeral grants; (b) the Medical Benefits scheme provides drugs, in-patient care (on the general ward of the hospital), diagnostic services, drugs, doctors visits; Public Health Act requirements – all health care services. There is no basic package of health benefits or a basic health plan to which all citizens are entitled.

2.4 Health Systems Delivery

Population-based Health Services. Such services are delivered by the following agencies:

(a) Holberton Hospital, a 141-bed acute care hospital with specialties of internal medicine, general, orthopaedic and ENT surgery, pathology, radiology, paediatrics and obstetrics/gynaecology;

(b) Mental Hospital – capacity of 150, now housing ninety (90) patients; (c) Fiennes Institute – a long stay geriatric institution, providing basic custodial care for 100 persons;

(c) Springview Hospital on the island of Barbuda – has in-patient capability but serves mainly as an ambulatory care facility; and

(d) A network of community clinics – nine (9) of which are classified as health centres, the remaining eighteen (18) being satellite clinics providing a smaller range of primary care services. These services are in the areas of maternal and child health care; environmental sanitation, mental health, disability and older persons health, nutrition, diabetes and hypertension, communicable disease control and surveillance, home visitation, cancer screening and referral services. There is also a school which screens for vision, hearing, speech, dental, and mental assessment

The country is divided into six medical districts and a District Medical Officer (DMO) is appointed to provide medical services to each district. A cadre of family nurse practitioners supports medical officers, public health nurses, clinic nurses and aides, and public health inspectors.

There is major emphasis paid to health promotion and protection. Main focus is on reproductive health including sexually transmitted diseases and HIV/AIDS, maternal and child health as well as adolescent care, the management of both communicable and non-communicable disease (primarily hypertension, diabetes and cancer), and drug and alcohol abuse. Coverage is national.

Immunisation coverage with DPT and OPV for infants up to 1 year old remains at 99% (1998) and 90% (1999) respectively. Immunisation against measles, mumps and rubella is approximately 97% of the target population in 1999.

Pre-natal services are offered by private practitioners, government health clinics, the Holberton Hospital and the private clinic, Adelin Medical Clinic, accounting for 96% coverage by professional trained staff. The majority (95%) of deliveries occurs at the Public Health Institution and the remainder at the private clinic or at home with professional assistance.

Individual Health Care Services: Both levels of care. The Health Information Unit has enhanced its data collection, analysis, and dissemination as part of an efficiency drive. That department has been producing an annual health information digest since 1996. The data is provided by the health facilities based on written records. Attention continues to be focused both on improving the timeliness and reliability of the reports. There is increased use of information for decision-making.

The population has always and continues to have personal choice of health care providers and the location of the provision of care. Anecdotal evidence suggests that there is great mobility of clients between private and public sectors – choice being based on the need for a second opinion and/or the availability and cost of services. Problematic also in the continued use of the casualty

services at the main hospital as an out-patient service, placing excessive demand on that department and impeding the delivery of emergency care.

Primary Care. The are no health centres equipped with computerised information systems. In 1999, approximately 6,000 adults of the 20+ adult population had contact with the adult health services of the Community Health Service yielding coverage of approximately 13.5% of the eligible population. The Medical Officer of Health considers this as extremely low coverage given the stated emphasis on preventive health. Consultations and check-ups are carried out in approximately equal number by physicians and non-physician staff (primarily nurse practitioners, public health nurses and nurse midwives) in the health centre/clinic network. The most common reasons for consultations among children (0-5 year old) are acute respiratory infections, diarrhoea, injuries and skin infections. In all other age groups, the most frequent consultations are for the non-communicable diseases - hypertension, diabetes and injuries. There are modalities for house calls. In 1999 however, home visits by health practitioners (15,312) declined when compared to the 16,475 home visits made in 1998. Home visits were conducted by physicians and trained personnel stationed in the health centre network. Coverage is universal.

Secondary care. All secondary care in the public sector is provided in the single acute care hospital that does have a computerised management information system. There is little evidence that information is used for clinical management. The Holberton Hospital had a bed complement of 141 during the period under review.

The production of services in the hospital is shown below. The average length of stay and the total number of patient days nearly doubled between 1997 and 1998 reflecting an occupancy rate of 125% (over-crowding, patients on stretchers in hallways etc) in 1999. The hospital had a bed complement of 220 before 1989, but a spate of hurricanes and other physical affronts have steadily reduced that complement to its present level of 141 beds. The need for a new or alternative facility is reflected in these usage figures.

SERVICE PRODUCTION, 1997-1998 – HOLBERTON HOSPITAL

	1997	1998
Total no. of discharges	4,584	4,904
Occupancy rate	74	125
Average days of stay	7	13

Source: Health Information Division, 2001.

There is a hospital infection committee as well as quality assurance programs in the main acute care facility. But these efforts are concentrated in the nursing profession. There are no other established and functioning quality programmes in the Hospital for the determination of either technical or perceived quality. For example, there are no user orientation procedures, no user satisfaction studies or surveys and no arbitration committees.

3. MONITORING AND EVALUATION OF SECTORAL REFORM

There is no health sector reform programme in Antigua and Barbuda. Modifications of the existing health system continue to be slow and incremental and not part of a planned process. The relatively few changes that have taken place during the last decade do not qualify as 'intensive transformation'.

The legal framework has remained unchanged although a new environmental health act is in draft form. The steering role of the Ministry of Health and the national management model has not been modified. Functions have not been separated. There have been intensive discussions of decentralisation but the system remains centralised with decision making on manpower, finances, systems and services located in the Ministry Headquarters. There is an increase in social participation but not control through a number of community based committees functioning in the areas of child/youth welfare, geriatric care and psychiatric care.

Antigua and Barbuda has not structured a formal programme of sectoral reform. The system however has directed much of its effort in health promotion especially in relation to HIV/AIDS, Health Education and Health and Family Life Education. Efforts are on going to improve the physical plant in which both primary and secondary/tertiary services are provided. Dental and pharmaceutical services will be provided in all new clinics. There are some efforts to improve quality assurance through rationalisation of health services and human resource development for new clinics and new hospital. Without the formal programme it is difficult to evaluate the impact of these sector reforms.

* The profile was prepared by a group of six professionals and national policy decision makers from the Ministry of Health, Ministry of Finance, and Ministry of Education and the PAHO/WHO Caribbean Program Coordination in Barbados. Technical coordination of the national group was the responsibility of the Ministry of Health of Antigua and Barbuda and the PAHO/WHO Caribbean Program Coordination in Barbados. Final review, edition, and translation are the responsibility of the Program on Organization and Management of Health Systems and Services of the Division of Health Systems and Services Development of PAHO/WHO.

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