REVIEW

IMPACT OF CARDIOVASCULAR DISEASES ON SAMOA'S HEALTH CARE SYSTEM

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Introduction

In the year 2000, the World Health Organization[1] urged its member states to strengthen their health care system's (HCS) performances to improve health outcomes. The WHO realizes that the available knowledge, interventions and technologies in the world today for curing diseases, prolonging life and promoting good physical and mental health are not reaching the people in greatest needs because of weak and deteriorating HCS and as a consequence the gaps in health outcomes continue to widen.

Samoa, a small island state in the South Pacific, is one example of a country that is going through economic, demographic and epidemiological transitions which is now evident by the rise in cardiovascular diseases replacing communicable diseases[2].

This paper will describe what constitutes a health care system. An introduction to the Samoa country profile including health profile, health care system and economic base followed by a look at the epidemiology and the impact of cardiovascular diseases (CVD) on its health system. The discussion that follows will analyze the key challenges that the health system of this small island state is facing in trying to curb the burden of CVD and the impact on the system including human resources, service delivery, health financing and health policies. Some key recommendation for policy changes is provided that may be useful to improve the health system in Samoa.

Health Care Systems

The HCS encompasses all the activities whose primary purpose is to promote, restore, or maintain health[1]. It includes efforts to influence determinants of health as well as more direct health-improving activities. A system should include patients and their families, health care workers and caregivers within organizations and communities, other sectors and stakeholders, and the health policy environment in which all health related activities occur.

In 2000, WHO came up with a model for a health system based on 'six building blocks' namely:
good health services,
a well performing health workforce,
a well functioning heath information system,
accessibility to medical products and technologies,
a good health financing system,
a greater need for strong leadership and governance from policy makers[1].

Samoa

Samoa comprises a small group of South Pacific islands with a total population of 180,741 (2006). Almost half of the population (49.2 %) is below 20 years with a median age of 20.5 years, and elderly people (65 +) made up 4.7 % of the total population[3]. The economy of Samoa is relatively small, with a GDP per capita estimated at USD1,860 (2004)[4].

Samoa's Health Care System (NHCS)

The public health sector dominates the Samoa's NHCS[5] with a relatively small private health sector. The services providing more specialized care by doctors are all based in the capital whilst nurses in health care centers provide services to the rural areas with limited facilities[6]. A large informal circle of health care providers exists including some 900 traditional healers and 200 plus traditional birth attendants. Extensive networks of Women's Committees are the major partners in the rural areas.

Samoa's Health Profile

Life expectancy at birth is 68 years[3] for the total population (66 for males, 70 for females). The infant mortality rate is 17.8 per 1000 live births[7] and maternal mortality rate at 60/100,000. Communicable diseases (CDs) currently are under control.

On the other hand, the non-communicable diseases (NCDs) are growing to an epidemic proportion replacing CDs as the main causes of death[8]. In 2002, strokes top the list followed by ischemic heart disease and hypertensive heart diseases[9]. These major NCDs are due to the rapid rate of changing lifestyle and exposure of the entire population to high prevalence of risk factors such as unhealthy diets, tobacco smoking, alcohol consumption and lack of physical activity.

Samoans are increasingly suffering from hypertension, diabetes and obesity[10]. Approximately 40% of the total population is currently smoking (56.3% for males, and 21.8% for females). Prevalence of obesity is 52.7% (48.4% for males and 67.4% in females), high blood pressure is 21.4% (males 24.2%, females 18.2%), diabetes is 23.1% (male 22.9%, females 23.3 %) which has doubled since a 1991 survey, and 30% of the total population are current alcohol drinkers.

Critical Analysis
Health Service Delivery Issues[i]

Five policy strategies will be critical for reversing the current trend of mortality from CVDs:
improvement of the acute treatment and subsequent secondary prevention for those who survive the events,
prevention targeted at high-risk individuals and populations,
improvement of rural health services through reorganized primary health care,
inclusion and strengthening the link with general practitioners as another arm of primary health care,
continuation of the population-wide preventive strategies currently in place.

The critical point for clinical services in this country is the lack of standard treatment guidelines and operating procedures to care for the sick[2]. Each doctor is utilizing guidelines of preference from different hospitals around the region for example New Zealand, Australia and Fiji. These should be developed with a consensus approach and be used in hospitals and health centers to support the staff in their decision-making. These critical decisions would include the rapid identification and initiation of first line treatment for patients with suspected ischemic heart diseases, acute coronary syndrome, and strokes. These guidelines will also help define the staff roles and responsibilities at all levels. The same guidelines will also direct an efficient referral system between the private sector and the Tupua Tamasese Meaole Hospital, which is the only secondary referral hospital in the country.

Another critical area that needs urgent attention is the ambulance service in the NHCS. It is poorly equipped with one proper ambulance plus one van-converted ambulance, which services the whole island. The drivers are not paramedics, which raises much concern about this service. In the USA, availability of paramedics with ambulances has been partly responsible for the 30% decline in door-to-needle time for initiation of thrombolytic therapy between 1992 and 1995[11] and subsequent mortality.

Survivors of CVDs events pose health problems that could persist across time and would require some degree of health care management[12]. Samoan patients would benefit tremendously from a rehabilitation program that focuses on secondary prevention strategies. An effective partnership (public-private mix) with the informal health sector, NGOs, private sector and other governmental organizations is needed to ensure a strong and sustainable rehabilitation and health promotion program that could reach all levels of the society, especially schools, villages and workplaces. One of the strengths with the NHCS response to CVDs is the free-of-charge access to all CVD medications. However, the NHCS should also revisit the existing dispensing and accessibility policy for low cost medications such as Aspirin, blood pressure lowering drugs (especially angiotensin converting enzyme inhibitors) and hypoglycemic and lipid-lowering drugs such as statins. Making these medications available at all times at the rural health centers and district hospitals should be a priority. This is because there has been consistent evidence that low cost combination therapy for secondary prevention has been shown to lower the risk of cardiovascular death by up to one half with few side effects[13].

Much health infrastructure and assets are aging and deteriorating[14] and therefore need replacement and maintenance work. Newer equipment in the major hospitals and health centers demands some modifications of buildings and electrical supplies to support a safe environment for patient and staff.

The other critical issue here is development of special policies that address standardized health service delivery to the rural and remote areas in Samoa. The development of tools to guide care provided by the rural nurses is a priority. The 2006 census shows that the Apia urban area contained close to one-quarter of the Samoan population while a little over three-quarters reside in the rural regions. The distance issues, the population characteristics and different disease patterns that are more prevalent amongst those living in the rural areas of Samoa should be addressed separately. For instance, there is a high prevalence of scabies, acute rheumatic fever, and upper respiratory tract infection, to name a few, amongst rural children as compared to those who live in the urban area. There is a lower prevalence of smoking tobacco, drinking alcohol and regular exercise amongst the rural population as compared to the urban. In addition, the difficulties in attracting and retaining health workers in the rural setting are a challenge. The HRPP manifesto 2006 clearly suggests that there should be “equivalent” access to good health and health care for people living in differ-

ent places, but there is no clear indication in health policies to reflect such a plan.

Health workforce Issues[ii]

Samoa currently has 74 medical doctors in clinical practice, with 49 at the National Health Services, 3 at the Oceania University of Medicine, one at the Diabetic Clinic, and 21 in private general practice, which corresponds to one doctor per 2,442 inhabitants. There are 242 nurses in practice, which corresponds to one nurse to approximately 746 inhabitants[2]. There is a desperate need for more medical doctors and nurses to properly cover the health services[15]. Additionally there is a lack of medical specialists and paramedical staff such as epidemiologists, nutritionists, dieticians, laboratory technicians and psychiatrists. This is reflected in the high proportion of costly overseas referrals costing the government of Samoa millions of dollars every year[16]. Secondly, many patients bypass the rural health centers and go straight to the referral hospital in the capital. Decentralizing the specialized services to the rural health centers is an option but could be a challenge given the inadequate human resources.

A constant drain of health workers away from rural areas to work at the main hospital results in an inequitable distribution of health professionals and services concentrated in the capital. The nurses work alone at all the rural and district hospitals (except MT II hospital on the island of Savaii) having no access to medical personnel. Consequently, the quality of care in the rural regions is affected and many patients suffer late referrals or long waiting hours at the only main hospital at the capital[2]. Acute strokes and heart attacks will have to bypass all these rural health centers and go straight to the only referral hospital in the capital.

Another major drain on the health sector is the migration of health workers (doctors and nurses) to nearby countries like New Zealand and Australia where the remuneration is much higher and better working conditions and opportunities for their career development are offered[17].

Recommendations

Appropriate remuneration packages for workers are the most difficult issue to deal with but very important for retention of the workforce. The Samoan Doctors' Association went on strike for three months in 2005 over poor salaries and working conditions[15]. Many left the country for overseas posts during and after the strike.

Staff members require ongoing development (training) and supportive environments for work including infrastructure and assets plus adequate and timely payment for services. This maximizes the performance and motivation of the existing workforce.

A new private/public partnership medical school[18] has been set up in Samoa hoping to produce some additional quality medical officers to feed the huge demand in the near future.

Upgrading the nurses' qualification as a faculty of the National University of Samoa is a great achievement and strategies to increase its annual intake should be encouraged.

Outsourcing some activities especially primary health care and preventive screening activities to the private sector, if carefully managed, is sustainable and cost effective.

Recruiting overseas doctors is an option but is going to cost the nation more.

Health Information System (HIS) Issues[iii]

One of the major obstacles in compiling reports for health in this country is the lack of available valid data. There are also in practice two confusing HIS systems in the public system; one is operated centrally and another one operated by the rural nurses. No feedback from the private sector is provided at all. In addition the available data is barely used because of lack of epidemiologists and skilled analysts.

The NHCS needs to simplify the HIS to allow for both the public and private sector to be involved in the system. The 2006 situational analysis[14] identified the need for the staff involved to upgrade their capabilities to manage, use and maintain the system. Decentralizing parts of the HIS for data collection using manual books is a starting point and essential to feed back the information to the staff.

Second, the Ministry of Health (MoH) must recognize the importance of research (operational or qualitative research) as an essential resource to inform policy formulation, planning and evaluation of programs and start allocating funds to build the capacity of potential researchers[19].

Equitable access to essential medical products and technologies[iv]

The Government of Samoa has a National Drug Policy and associated Plan of Action[20] that instruct the MoH to provide at all times efficacious, high quality, safe and cost effective pharmaceutical products to the population of Samoa.

A recent public consultation (2005)[14] identified the following flaws: shortages of common drugs, shortages of peripherals such as dressings, needles and syringes, delays of ordering and delivery of drugs to the peripheral health centers, inefficiencies in the use of medications and poor first in first out practices at the health centre level.

Those who have already suffered a CVD event are at risk of recurrences and death. But this risk could be substantially lowered with a combination of low cost medicines like aspirin, blood pressure lowering and a cholesterol lowering drugs. The policy definitely needs implementation and monitoring which will contribute to overall improvement of the NHCS performance.

Health Care Financing Issues[v]

Samoa already spends 5.6% of its GDP on health, equivalent to18 % of the national budget, which is one of the highest amongst the Pacific Island Countries[21]. Public expenditure for health comprised 61% of total health spending in 2002/2003. Private spending comprised for health comprised 19.7% of total health spending, and donations and foreign aid (increasing every year) made up the remaining 19%[16].

Health expenditure on NCDs in 2000 accounted for 43.3% of total health expenditure with the majority going to clinical care[16]. The overseas treatment scheme is still increasing year after year and CVD takes almost 80% of the share.

The main health financing questions that may need answering in the future in terms of policies and sustainability of service to the people of Samoa are: Should the government continue financing 60% of the health budget? What is the role of individuals and the private sector in financing the Samoan health system? Is there a role in the future for private insurance companies in financing health? Should donors continue increasing their current level of disbursements to health financing?

The Government of Samoa could look at identifying potential areas to contain costs or to increase its revenues through alternative financing mechanisms such as cost recovery (and not necessarily by creating a health insurance mechanism like social insurance or Medisave[22]) whilst not marginalizing vulnerable groups and the poor.

Also there is a need to rationalize health service delivery and allocation of resources to minimize wastage. Pharmaceuticals for instance account for over 16% of the total health expenditure and over 24% of out-of-pocket expenses. Generic drugs could be used as substitute for other equivalent higher price prescription drugs and the Government could aim to initiate policies for improving the efficiency by which pharmaceuticals are imported, distributed and sold in the country.

Population-based health promotion interventions have been shown to be the most cost effective methods of reducing the risk of CVDs across the entire population. Thus, the NCD policy and action plan mentioned above should be strengthened and monitored at all levels.

Leadership and governance[vi]

The MoH, as the regulator of health in Samoa, must ensure that appropriate, culturally sensitive, and evidence-based strategic policy frameworks exists to guide and monitor the health sector partners for better health status in the country. It should strive to gain national and international co-operation to maximize the effectiveness of its leadership and governance role. International organizations are willing to help and donate funds, but they need to see good governance (with the principles of transparency, accountability and cooperation) in the country of concern[23].

Conclusion

If available health interventions are not reaching the people who need them the most then what is the use of a health system?

Cardiovascular diseases are on the rise and have already taken their place as the number one killer in this small island state of Samoa. More worrying, since more than half of its population are less than 20 years old who and already exposed to risk factors of CVDs, this country should prepare for hard times in the next twenty years (lag time) if action is not taken now. This country will need not only a health system that can detect and treat acute heart attacks and stroke but also be able to cater for the long-term rehabilitation for those who survive the events. The country is short of medical personnel, nurses, paramedics and so forth. The government funds 60% of the total health budget, donor and private funds provide 20% each and the government should start searching for other mechanisms to finance health such as an insurance scheme, otherwise sustainability will be a big issue in the near future.

On the bright side, the health sector reform processes currently happening in Samoa are hoping to bring innovative policies and strategies not only to strengthen public and private partnerships but also to provide a timely evaluation of

the current NHCS that hopes to improve the health outcomes for this country and especially to curb and reverse the current burden brought by cardiovascular diseases.

Notes

A good service delivery health system is one that delivers effective, safe and quality interventions to everybody with minimum waste of resources
A well performing workforce is one that has sufficient staffs who are fairly distributed around the country and are competent, responsible and productive given the limited resources.
A well functioning HIS is one that could collect, analyze and review data and managed to disseminate and use information for planning and evaluating health care system.
A well functioning health system ensures that the medical products and technologies are quality assured, safe, efficacious and cost-effective and scientifically sound for use.
A good health financing system ensures that there is enough funds for operation and has the ability to protect the vulnerable groups and at the same time could provide incentives for providers.
Involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system-design and accountability.

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