



GOVERNMENT OF SAMOA



**National Noncommunicable
Disease Control Policy
2018 – 2023**

MINISTRY OF HEALTH

KEY MESSAGE



Hon. Tuitama Dr. Leao Talalelei
Tuitama
Minister of Health

In alignment with the SDS 2016/17-2019-20 over-riding vision of attaining “An Improved Quality of Life for All”, this Policy and Plan of Action will serve to ensure that it will be “for ALL”. It is a social policy, and places emphasis on the United Nations 2030 development theme of ‘leaving no one behind’. That entails not only employing a much more critical systemic thinking approach amongst all health professionals in addressing NCDs, it declares the increase utilization of our Public-Private Partnerships to implement programmes where it best fits; and calls for a Whole-of-Country approach into achieving our health outcomes relative to NCD prevention and control.

What is key are the fundamental strategic directions of our time. While there has been improvement, Samoa still has a low per capita resources for health; the allocation of scarce resources is skewed to the main hospital; our health service delivery system is heavily hospital-centric and primary health care is weakened; the health information management system required for disease management and patients tracking is just been developed and; NCDs are the largest cost burden on the health services and main driver of overseas medical treatment. The gaps are clear and indicate immediate efforts to strengthen this national strategy, to support a people-centred integrated service for NCD management.

In search for answers, we need to fully understand that the demand for health services is unlimited but resources are always finite. Universal health coverage globally is an inspiring idea, but it needs to be a practical one too. Given our limited health resources, the answers to which services we can provide or otherwise, is context-dependent. Thus understanding further where our gaps are in terms of data, equity, capacity, the dynamics of our political economy and coverage of services and interventions, calls for core and strategic indicators. It is about ensuring that baseline data and annual targets to achieve our health indicators at all levels, will help answer key policy and implementation questions as well as forward planning in NCD control and management. In essence, that requires measuring value, but not valuing measure.

To that end, the motivations for this new National NCD Policy are the great strides already made in addressing NCDs in Samoa. That includes the Ministry of Health placing the focus back on Public Health; Government’s demonstrating more of political will through the merging of the MOH and NHS to improve access, service delivery and quality of services and; continued tax reforms related to alcohol, tobacco and imported foods with high sugar/high salt/high fat content. These positive developments set the scene to further enhance and support this national policy, for the benefit of Samoa in the decades ahead. As the Minister of Health, I am confident that the latter will respond to questions on the efficiency of public funding allocation for health and value for money spent.

My appreciation for all involved in supporting our efforts in realising this Policy for Samoa not only in Government, but especially our Partners in Health both bilateral and multilateral and the wider community. It is a strategic document that will live, and is geared to articulating the determination of our people to strengthen our resolve against the NCD epidemic given our realities.

It pleases me to present this National Noncommunicable Disease (NCD) Control Policy 2018-2023 and commits the health sector to build up and accelerate all efforts in realising its objectives.

Soifua,



Hon. Tuitama Dr. Leao Talalelei Tuitama
MINISTER OF HEALTH

FOREWORD

A Healthy Samoa based on an inclusive people-centred health service, is Government's vision in Health. It is an aspiring vision, but can be achieved if the emphasis now is placed more on health prevention, protection and compliance. In align with the SDS 2016/17-2019/20 strategic focus on health outcomes, that will entail (but not limited) a national immunization program, a screening program for rheumatic fever and an NCD control and management program during this period of review. To accelerate our collaborative efforts towards that end, the National NCD Control Policy 2018-2023 is a multiyear effort by the health sector, our communities and partners to develop a comprehensive national NCD Control Program that aims to tackle the NCD challenge in a more systematic approach.



Leausa T. Dr. Take Naseri
Director General of Health/
Chief Executive Officer

The policy comes at the right time. With the current squeeze on aid budgets and a persistent scepticism about the return on investing in health care compared with other priorities, we need guidance on how to design affordable, equitable, good-quality packages of care for Samoa. Such guidance in our view must be both methodologically rigorous and grounded in practical challenges, whilst being more realistic of the need to develop within our own means. To achieve that purpose, the policy proposes:

1. To promote the health and well-being of the Samoan community.
2. To achieve sustainable improvements in the health status of Samoan by decreasing the incidence of NCDs.
3. To improve the health-related quality of life of Samoans and reduce complications and premature mortality in people living with NCDs.
4. To improve the capacity of human resources through professional developments to better respond to NCD control and treatment.
5. To assure the rights of all people with NCDs to access quality and affordable health care and;
6. To foster community-inclusive evidence based innovation and service sustainability.

Given our urgent challenges, Government has advanced developments by shifting investment in health to Population Health/Public Health through the planned decentralization of resources, both personnel and services. That will entail interventions such as stationing multi-disciplinary teams (doctor, nurse, nutritionist, environmental officer) at rural district hospitals, with functions clearly defined and care provided in a coordinated manner. To support the implementation of the proposed strategy, investment will also be for rural facility construction and upgrading. Strengthening outreach services to the community and further empowering community development is of the essence, and that will largely be achieved and measured through the rolling out of the PEN Fa'a Samoa to all villages. Service Agreements with sector agencies, NGO partners, church and youth groups and agreements with other government ministries will be further engaged, to improve utilization of the PPP arrangement but mainly financial predictability and accountability in health.

Research partnerships, specifically with Yale and Brown University, have also been undertaken to investigate the full burden of obesity, poor nutrition, and hypertension. The Obesity, Lifestyle, And Genetic Adaptations (OLAGA; "life" in Samoan) Study Group (Yale & Brown Universities) uses a life course approach to understand the origins of obesity among Samoans and other Pacific Islanders and focuses on developing culturally relevant interventions to reduce the burden of obesity and obesity-related conditions. This will help inform interventions as the health sector moves forward in the fight against NCDs.

The annual and multiyear targets and strategies proposed to achieve the indicators of this Policy, derive from the SDS and the HSP 2008-2018, but also through the localization of SDG indicator mapping exercise undertaken by Government (through SBS) and UNDP and; several international frameworks from WHO's set of 9 voluntary global NCD targets for 2025. They are achievable, and the plan of action has been well placed to ensure that issues such as mental health and disability

inclusiveness are also given priority during this developmental phase. It is not easy to change grounded behaviours, but we all need to strengthen our concerted efforts to be more creative and do things differently to tackle NCDs. The Policy serves to facilitate all of those.

We look forward to working with our community at large and our Partners in Health in implementing it and also taking the lessons learnt back to our own whole-of-sector outfit, for a healthier Samoa.

Ma le faaaloalo tele,



Leausa Toleafoa Dr. Take Naseri
Director General of Health / Chief Executive Officer
Ministry of Health

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The Ministry of Health would like to acknowledge all health sector partners and stakeholders from the public sector, private sector, NGOs, civil society and representatives from the community who participated in the formulation of the second edition of the National Noncommunicable Disease (NCD) Control Policy 2018–2023. Your invaluable contributions assisted tremendously in developing this evidence-based national health policy aiming to address emerging health issues pertaining to NCDs and its impacts on the health of the Samoan population.

Special acknowledgement is extended to Ms. Bita Minaravesh, an intern from the University of Southern California, who conducted the Gap Analysis Report for the National NCD Policy 2010-2015, which significantly contributed to the development of this document.

The Ministry would also like to thank the World Health Organization in Apia for the financial support, making this work possible.

Lastly, many thanks is extended to all implementing partners on their continued efforts in driving programs aiming at achieving Sustainable Development Goals pertaining to NCDs, the national health priorities highlighted in the Strategy for the Development of Samoa 2016/17 – 2019/20 and health sector priorities identified in the Health Sector Plan 2008-2018 Mid-term review.

ACRONYMS

ADB	Asia Development Bank
ARF	Acute Rheumatic Fever
BMI	Body Mass Index
CDCC	Communicable Disease Control Committee
COPD	Chronic Obstructive Pulmonary Disease
CRD	Chronic Lower Respiratory Disease
CVD	Cardiovascular Disease
DM	Diabetes Mellitus
FCTC	Framework Convention on Tobacco Control
FY	Financial Year
GSHS	Global School Health Survey
GoS	Government of Samoa
HRN	Health Registration Number
IHD	Ischemic Heart Disease
LTA	Land Transport Authority
MAF	Ministry of Agriculture and Fisheries
MDS	Mobility Device Services
MESC	Ministry of Education Sports and Culture
M.E.T.I.	Matuaileoo Environmental Trust Incorporated
MOF	Ministry of Finance
MOH	Ministry of Health
MfR	Ministry for Revenue
MOP	Ministry of Police
MNRE	Ministry of Natural Resources and Environment
MWCSD	Ministry of Women Community and Social Development
NCDs	Non Communicable Diseases
NHS	National Health Services
NKF	National Kidney Foundation
NOLA	Nuanua o le Alofa
PEN	Package of Essential NCD Interventions
RF	Rheumatic Fever
RDH	Rural District Hospitals
RHD	Rheumatic Heart Disease
S.A.M.O.A	SIDS Accelerated Modalities of Action Pathway
SDGs	Sustainable Development Goals
SFHA	Samoa Family Health Association
SIDS	Small Island Developing States
SIMDES	Samoa Integrated Mobility Device Services
S.N.A.P	Smoking, Nutrition, Alcohol, Physical Activity
SRC	Samoa Red Cross
STEPS	Not an acronym. It is the term used for the WHO stepwise approach to surveillance of risk factors
SVSG	Samoa Victim Support Group
SWA	Samoa Water Authority
TTM	Tupua Tamasese Meaole Hospital
WHO	World Health Organization
WB	World Bank

1. INTRODUCTION

The Samoa National Noncommunicable Disease Control (NCD) Policy 2018-2023 is aligned with the WHO Global Action Plan for Noncommunicable Diseases 2013-2020 which presents the 9 voluntary global targets; the Western Pacific Regional Action Plan for the Prevention and Control of Noncommunicable Diseases 2014-2020 which provides a roadmap and cost-effective interventions to attain the 9 voluntary global targets. The Samoa Health Sector Plan 2008-2018 highlights the priorities of Government within the Health Sector. One of the four priority areas is to address the increasing levels of NCDs.

The NCD Policy is founded on the Government of Samoa's priorities through *Samoa's Strategy for Development* (SDS). The SDS through the Social Sector identifies health as a priority of Government, and similarly highlights the priorities of health with the vision of "Health for All."

The Health Sector Plan 2008-2018 also highlights NCDs as a health issue that requires collective action to face the challenges posed by the diseases. This policy document is the second policy undertaken by the Ministry to respond to the challenges posed by NCDs to ensure the vision of "A healthy Samoa" for all is achieved.

NCDs continue to be the priority area of concern and accounts for the majority of burden of diseases in Samoa. Currently, chronic NCDs are overtaking communicable diseases as the dominant health problem, and are now the leading causes of mortality, morbidity and disability.

Non-communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors. The main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes. NCDs disproportionately affect people in low- and middle-income countries where more than three quarters of global NCD deaths – 31 million – occur.

The Key facts from the WHO Fact-sheet¹ on NCDs notes that:

- 80% of all premature deaths are caused by Cardiovascular diseases, cancers, respiratory diseases and diabetes.
- 70% of global deaths around the world are caused by NCDs – an equivalent of 40 million people each year.
- 15 million people between 30-9 years of age each year die from a NCD; over 80% of these 'premature' deaths occur in low-and-middle-income countries.
- 17.7 million people annually die from cardiovascular diseases.
- 8.8 million die from cancers.
- 3.9 million die from respiratory diseases.
- 1.6 million die from diabetes.
- Tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from NCD.
- Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs.

The Health Sector Plan 2008–2018 identifies the rapidly increasing levels of NCDs, contributing to the major impacts on the health system, community mortality and morbidity and the economy of Samoa, as a major challenge. NCDs and conditions, including obesity, diabetes, heart diseases, high blood pressure, strokes and cancer, are a top health priority in

¹World Health Organization (n.d.), Noncommunicable Disease Key Facts, accessed 16 June 2018, retrieved from <http://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases>

Samoa. The prevalence of these diseases as recorded in the Samoa NCD Risk Factors STEP Report is high and increasing; overweight is currently 84.7%, obesity is at 63.1%, diabetes at 24.8% and hypertension at 24.5%². NCDs are now prevalent in younger age groups and complications from these diseases are more common. The Global School Health Survey conducted in 2010 in Samoa amongst 13-15 year olds found that 43.4% of boys and 59.1% of girls were overweight, of which 15.7% and 22.3% respectively are obese.³ The rising levels of obesity coincided with a change in the Samoan dietary pattern from locally cultivated, low fat foods to modern (unhealthy) diets, corresponding to the rise in NCDs.⁴

The determinants of NCDs are multiple and often outside the control and influence of the health sector. Thus are social, economical, environmental factors, financial that adversely impact health outcomes. The four main risk factors associated with NCDs are Smoking (tobacco), poor Nutrition, Alcohol consumption and Physical Inactivity. In order to reduce these risk factors change in lifestyle and behaviour of individuals, families and the wider community need to be strengthened. Furthermore, effective legislations, policies, environmental control, supportive environment, strengthen community action and reorienting of health services need to be strengthened. Strong political commitment and leadership at the National and Community level is crucial in the prevention of NCDs. for greater support and engagement from the leaders or the policy makers in Government. In addition, there is a need for communities to promote and encourage healthy behaviours, which ultimately prevent the onset of NCDs.

This policy document outlines new and improved strategies that will enable coordinated efforts amongst the health sector partners and in turn fulfilling its contribution to the vision of a healthy Samoa and an improved quality of life for all. It maps out a set of key strategic areas to be implemented and a set of indicators to be achieved by the end of the five year period. Since the development of the first NCD Policy in 2010, the international, regional and national legislative and policy platform has changed. Several continuing and emerging issues have been realised as a result of ongoing data reporting and improved access to information. These factors have necessitated the revision of the Policy.

A gap analysis of the National NCD Policy 2010-2015 conducted in March 2017 saw the completion of 66 outcome measures and an overall goal completion rate of 48.5%. There has been progress made towards an additional 44% of the original goals.⁵ In terms of Sustainable Development Goals, the review found that Samoa has already met 2 of the SDGs namely;

- By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
 - 2015 Ratio: 51 per 100,000 live births⁶
- By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
 - Neonatal rate of 7 per 1,000; Under-5 mortality rate of 18 per 1,000⁷

²WHO Stepwise Surveillance of Risk Factors, 2013, World Health Organization & Ministry of Health, Samoa.

³Situation analysis of issues related to childhood obesity in Samoa, 2012, C-POND, Fiji National University.

⁴Thow, A.M., & Quesada, C., 2010. Making healthy choices easy choices – the impact of trade regulation and fiscal policy on population nutrition in the Pacific, and future policy implications, University of Sydney, Australia.

⁵Ministry of Health, 2017, *Gap Analysis of NCD Policy and Plan of Action 2010-2015*, Apia, Samoa.

⁶Central Intelligence Agency, 2015, The World Fact Book – Maternal Mortality Rate, Retrieved from https://www.indexmundi.com/samoa/maternal_mortality_rate.html

⁷Samoa Bureau of Statistics, 2015, Samoa Demographic and Health Survey 2014, Apia, Samoa.

The Strategic Action Plan towards the end of the document details the Key Strategic Areas, Objectives and Specific Actions for all stakeholders, which are closely aligned to the national NCD targets for Samoa and the recommendations from the NCD Policy 2010 Gap Analysis Review. A costed plan is also included to provide estimates of the funding needed for all programs geared towards the prevention and control of NCDs.

National NCD Policy 2010 – 2015 Review⁸

The review of the National NCD Policy 2010 – 2015 analyzed the completion of 66 outcome measures through stakeholder interviews within various MOH staff and a literature review of relevant policies and work plans. The review found an overall goal completion rate of 48.5%, although progress has been made towards an additional 44% of the original goals. The review also provided a status report on individual indicators, as well as an overview for each Key Strategic Area.

The main successful areas were in; (i) Primary prevention and health promotion programs; (ii) Accounting and finance initiatives; (iii) Working with other organizations and across the health sector for health promotion and primary prevention using evidence-based strategies; and (iv) Continued support of existing initiatives including SWAP and Healthy Island. The review also concluded that the health sector did not adequately address; (i) Tertiary prevention programs; (ii) Palliative care services; (iii) Lifestyle change counseling and training; and (iv) eHealth related initiatives, including HRN simplification and adequate PATIS access.

Although work was in progress for the remaining areas, further action is required for the following initiatives: (i) Secondary prevention, (ii) Fully integrating substance abuse management and prevention, (iii) Building and updating disease-based registries, (iv) Improving diabetic care services, (v) Supporting NCD surveillance, (vi) Built environment improvements, (vii) Ensuring the incorporation of all islands and communities into health promotion programs, (viii) Increasing public awareness of the risk factors and prevention methods for all NCDs, (ix) Facilitating youth programs, (x) Screening various NCDs, namely cancers, in all communities through partnerships with other organizations, (xi) Increasing awareness of mental health resources, (xii) Establishing clear guidelines and protocols.

The review found that certain key areas of NCD management, including disability care and disaster preparedness, had not been included in the previous NCD Plan of Action. These gaps were identified through an analysis of internal and external frameworks from international public health organizations. The recommendations list at the end of the gap review adopts the various subjects left previously unaddressed in addition to the insight shared through stakeholder interviews. Key recommendations include:

- Creating a clear line of communication between policy makers & implementers
- Focusing future NCD awareness programs on young children
- Expanding the focus of NCD to actively address cancers, chronic care, respiratory illness, and more.

2. VISION

Improved health through the prevention, management and control of Noncommunicable Diseases

⁸Ministry of Health, 2017, *Gap Analysis of the NCD Policy and Plan of Action 2010-2015*, Apia, Samoa.

3. AIM

To promote a commitment to and guide for action to achieve the Government of Samoa's Goals to improve the health of the population through the prevention of Noncommunicable diseases.

4. GOAL

To reduce the burden of Non-communicable Diseases by 2023

5. GUIDING PRINCIPLES

The guiding principles below are derived from the Health Sector Plan 2008-2018:



6. OBJECTIVES

1. To promote the health and well-being of the Samoan community.
2. To achieve sustainable improvements in the health status of Samoan by decreasing the incidence of NCDs.
3. To improve the health-related quality of life of Samoans and reduce complications and premature mortality in people living with NCDs.
4. To improve the capacity of human resources through professional developments to better respond to NCD control and treatment.
5. To assure the rights of all people with NCDs to access quality and affordable health care.
6. To foster community-inclusive evidence based innovation and service sustainability.

7. POLICY LEGISLATIVE FRAMEWORK

This NCD Policy reinforces the Government of Samoa and the Health Sector's commitment to regional and international initiatives, treaties and conventions, declarations and frameworks in particular:

- Sustainable Development Goals 2015,
- 2015 Yanuca Island Declaration on Health in Pacific Island Countries,
- S.A.M.O.A Pathway 2014,
- NCD Roadmap for the Pacific Region 2014,
- WHO NCD Action Plan 2008,
- UN Political Declaration on NCDs 2011.

Futher initiatives are listed in Annex 1.

NCDs result from a myriad of causes. While the Ministry of Health understands that interpersonal factors and individual choices can lead to NCDs, legislative changes that reduce individual burden ("upstream" approaches, meaning interventions which focus on society as a whole) are often the most effective in curbing the rise in NCDs. In particular, advocating for policies that make healthy food more affordable, make it more difficult to purchase tobacco, and decrease the likelihood that individuals will drink alcohol excessively are of particular importance.

A suite of policies and strategies have also been rolled out particularly to address issues faced by the Health Sector. A list of some of the health policies and strategies that give effect to the control and prevention of NCDs in Samoa can be found in Annex 1.

8. SITUATIONAL ANALYSIS OF NCDS IN SAMOA

The Ministry of Health has worked with a wide range of stakeholders and community partners to gauge the prevalence of NCDs in the Country. Key findings are listed below by disease prevalence and SNAP factors.

Mental Health	<ul style="list-style-type: none">• 16.4% has moderate to severe mental disorder
Obesity	<ul style="list-style-type: none">• 84.7% were overweight(age group: 25-64 years)• 63.1% were obese (age group: 25-64 years)
Diabetes	<ul style="list-style-type: none">• 24.8% had impaired fasting glucose• 20.9% had raised blood glucose
Hypertension	<ul style="list-style-type: none">• 28.9% had hypertension (currently on medication for raised blood pressure)• 70.6% had hypertension (who are not on medication for raised blood pressure)• Average systolic blood pressure 127.2mmHg• Mean diastolic blood pressure 77.5mmHg

Source: NCD Risk Factors STEPS Report 2014

The following major NCDs have significant disease burden in Samoa; cardiovascular diseases, diabetes mellitus, chronic respiratory diseases, cancers, injuries and poisoning.

8.1 Disease Trends⁹

Comparisons from 1978 and 2013 showed the following results;

Condition	Male		Female	
	1978	2013	1978	2013
Type 2 DM prevalence	1.2%	19.6%	2.2%	19.5%
Obesity Prevalence	27.7%	53.1%	44.4%	76.7%

If current trends continue, by 2020: Type 2 DM rates in women are expected to reach 26% in men and women whereas Obesity prevalence is projected to reach 59% in men and 81% in women.¹⁰

a. Cardiovascular Diseases

Cardiovascular diseases is a class of diseases that involves the heart or blood vessels.¹¹ Among these diseases, significant causes of morbidity include; coronary heart disease (ischemic heart disease), stroke (cerebrovascular accident), heart failure, peripheral vascular disease and hypertension.¹² For the period January – June 2016, there were a total of 650 admissions at the TTM Hospital with a diagnosis of cardiovascular diseases. Of these, 58% were hypertension, stroke, ischemic heart disease (IHD) and rheumatic heart disease (RHD).

- **Hypertension**

There were 207 admissions for hypertension, with most admissions aged more than 45 years in both male and female. This accounted for 55% of all cardiovascular diseases.

- **Ischemic Heart Disease (IHD)**

There were 48 admissions with the IHD diagnosis within the age range of 35-65+.

- **Stroke**

There were 95 admissions with stroke; the greatest number were those aged 65 and above.

- **Rheumatic Heart Disease (RHD)**

There were 21 admissions with RHD and the number signifies that RHD is more common in females.

b. Diabetes Mellitus (DM)

About 6.4% of admissions (in the same period) were DM; 87% with Type 2 diabetes, 11% with gestational diabetes and 2% Type 1 DM. Of the 350 admissions with primary diagnosis of DM, 93 (26.5%) were recorded as presenting with no complications; while 219 (62.6%) recorded as presenting with peripheral circulatory complications, 23 (6.6%) with multiple complications, 9 (2.6%) with ketoacidosis, 4 (1%) with renal complications and 2 (0.6%) with hyperosmolality. (that is, 3 of 4 admissions would have diabetic complications)¹³

c. Chronic Respiratory Diseases

Chronic Respiratory Diseases include asthma, chronic obstructive pulmonary diseases (COPD), respiratory allergies, occupational lung diseases and pulmonary

⁹Lin S, Naseri T, Linhart C, et al. Trends in diabetes and obesity in Samoa over 35 years, 1978-2013. Diabetic Med. 2017;34(5):654-661.

¹⁰Lin S, Naseri T, Linhart C, et al. Trends in diabetes and obesity in Samoa over 35 years, 1978-2013. Diabetic Med. 2017;34(5):654-661.

¹¹Definition of Cardiovascular Diseases, retrieved on 26th June 2017 from

www.cdc.gov/healthcommunication/toolstemplates/entertainment/tips/cardiovascular diseases.html

¹²Non-communicable Disease Surveillance Report, January-June 2016, Ministry of Health, Samoa.

¹³Non-communicable Disease Surveillance Report, January-June 2016, Ministry of Health, Samoa.

hypertension.¹⁴Chronic Lower Respiratory Disease (CRD) include Asthma and COPD of which Chronic Bronchitis and Emphysema are the two main conditions comprising COPD.¹⁵CRD are seen mostly in age groups less than 15 years old and those aged 65 and older, but have different diseases. The young are mostly diagnosed with asthma at 47% and the older age group with COPD at 40%. Cigarette smoking is the main risk factor for COPD and the current incidence rates of these conditions reflect smoking rates 20 years and more in the past.¹⁶

d. Cancers

There were 81 admissions for cancer, 55% females. The top cancers overall were Digestive, Uncertain, Respiratory, Breast, Lymphoid and Benign type. Forty two percent of female cancers were either breast, cervix or ovarian. Male were more likely to have digestive, respiratory or uncertain cancers.¹⁷

8.2 Modifiable Risk Factors

There are few risk factors shared among all major NCDs, namely, smoking, unhealthy diet, physical inactivity and harmful alcohol use. Prevalence of these risk factors at population level has a major influence on morbidity and mortality due to NCDs.

1. **Smoking** – the prevalence of current smokers has decreased in 2013 compared to 2002 for the same age group of 25-64 years of age, from 40.4% to 27.1%.¹⁸ The majority of smokers are male at 36.5% compared to 13.7% of female. Those who smoked manufactured cigarettes did so at an average of 9.4 cigarettes per day for the age group of 18-64 years of age. Of the current smokers, 64.5% tried to stop smoking during the past 12 months.¹⁹After imposition of more tobacco regulations, taxation and health programming, tobacco use prevalence among both sexes decreased as follows;
 - Male daily smoking prevalence has decreased from 76% to 36%;
 - Female daily smoking prevalence has decreased from 27% to 15%
2. **Nutrition** – unhealthy food is defined as foods that contain high-salt content, high-sugar content, high trans-fatty acids and saturated fat. High consumption of fruits and vegetables is strongly associated with better health outcomes. Results from the STEPs survey indicates that the mean number of servings of fruit consumed on average per day has dropped from 1.5 in 2002, to 0.9 in 2013. The mean number of fruits consumed in a week slightly increased from 2.8 to 3.2.²⁰
 - The percentage of individuals who ate less than 5 combined servings of fruits and vegetables between 2002 and 2013 has increased from 37.7% to 91.6%.
 - For the type of oil or fat most often used for meal preparation in household, 86.9% is vegetable oil used, 4% lard, 7.5% coconut cream oil and 1.1% butter.

¹⁴Definition of Chronic Respiratory Disease, retrieved on 26th June 2017 from www.cdc.gov/healthcommunication/toolstemplates/entertainment/tips/chronicrespiratorydiseases.html

¹⁵Noncommunicable Disease Surveillance Report, January-June 2016, Ministry of Health, Samoa.

¹⁶Noncommunicable Disease Surveillance Report, January-June 2016, Ministry of Health, Samoa.

¹⁷*Ibid.* p. 11

¹⁸WHO Stepwise Surveillance of Risk Factors Fact Sheet, 2002 & 2013, World Health Organization & Ministry of Health, Samoa.

¹⁹WHO Stepwise Surveillance of Risk Factors, 2013, World Health Organization & Ministry of Health, Samoa.

²⁰WHO Stepwise Surveillance of Risk Factors Fact Sheet, 2002 & 2013, World Health Organization & Ministry of Health, Samoa.

- More than half (of study population for STEPs 2013 survey), 52.5% always or often add salt to their food before eating or as they are eating and 60.6% adds salt to their food when cooking or preparing foods at home.
 - The mean salt intake was 7 grams a day; 7.6g/day for men and 6.4g/day for women. Younger age groups (18-44 years of age) consumed about 7.3g/day compared to 6.3g/day for the older age group (45-64 years of age).
3. **Alcohol Consumption** – The overall prevalence of current drinkers (those who have consumed alcohol in the past 30 days) was 10.9%. Percentage of current drinkers is significantly higher in male (18.8%) compared to female (2.2%).²¹
- Male binge drinking prevalence (5 or more drinks on one occasion) has decreased from 44.3% in 2002 to 17.7% in 2013.
 - Female binge drinking prevalence (4 or more drinks on one occasion) has decreased from 15.7% in 2002 to 2% in 2013.
4. **Physical Activity** – there has been a significant increase in high levels of activity, from 32.6% in 2002 to 61.1% in 2013.²² It is also evident that the Samoan population is becoming more health conscious by participating in various physical activity programs countrywide. However, data reflects otherwise that obesity rates are on the rise as well as NCD related deaths.
- The percentage of people with low activity levels (<600 MET-minutes/week) has decreased from 51.7% in 2002 to 19.9% in 2014.
 - The median time spent in physical activity on average per day (minutes) is 119.3 minutes for both sexes, whereby men spent more time, 154.3 minutes, compared to women, 85.7 minutes. Of the median minutes, approximately half, 52.4 minutes, are work-related physical activity.

8.3 Priority NCDs

In addition to addressing the social determinants of health, the Ministry of Health seeks to conduct a multifactorial and interdisciplinary approach to reduce the prevalence of NCDs in the country. With limited fiscal resources and staffing, it's imperative that the MOH focuses on diseases and conditions that have the highest morbidity levels in the country and those that incur a large societal cost. A focus will be placed on addressing the following;

- Diabetes Mellitus
- Hypertension
- Cardiovascular disease
- Cancer
- Mental health conditions

8.4 Financial Implications of NCDs

According to the National Health Accounts Report for FY2014-2015, NCDs amounted to ST\$40.3m in total health spending and has the largest share at 36.4% compared to other diseases and conditions such as non-disease specific items (which refers to administration

²¹WHO Stepwise Surveillance of Risk Factors Fact Sheet, 2002 & 2013, World Health Organization & Ministry of Health, Samoa.

²²Ibid.

costs that cannot be attributed by diseases) at 21.6% (ST\$23.9m) and infectious and parasitic diseases at 17.6% (ST\$19.5m).²³

The Samoa National NCD Cost Analysis Study conducted in 2017 by the World Bank identified the increasing trend and cost pressures from NCDs. Findings from this research confirms that NCDs account for a large part of overall healthcare spending in Samoa with cardiovascular disease as the most costly (11%), followed by cancers (6%) and diabetes (6%). Renal failure accounts for 0.5% of spending, but it is itself a consequence of advanced cardiovascular disease (CVD) or diabetes.²⁴ Another correlation indicates that as people age, spending increases. Per capita spending in those aged 65 years and older was 2 to 3 times that those aged 30-50 years.²⁵

List of some of the current interventions is listed in Annex 2.

9. KEY STRATEGIC AREAS (KSA)

The following details the framework of the NCD Policy & Plan of Action. There are 5 key areas of focus that will contribute to the achievement of this policy. These KSAs were recommendations from the review of the 2010 NCD Policy conducted in 2017, which proposed areas that need consideration for the broader scope of NCDs to be included. Part of these KSAs are in alignment with the Western Pacific Regional Action Plan for the Prevention and Control of NCDs (2014-2020) for a more holistic approach to NCD control.

KSA 1: Governance, Leadership, and Partnership.

- 1.1 Establish multi-sectoral mechanisms to plan, guide, monitor and evaluate and enact NCD multi-sectoral plans, policies and legislations.
- 1.2 Strengthen partnerships with health service providers of NCD health screenings and counseling
- 1.3 Strengthen partnership to promote healthy lifestyles in communities.
- 1.4 Strengthen policies and legislations for NCDs
- 1.5 Strengthen Leadership, Political Commitment and Coordination.
- 1.6 Strengthen partnership with Education Sector

KSA 2: Health Promotion, Advocacy and Risk Reduction.

- 2.1 Strengthen NCD awareness and physical activity programs in communities to promote the importance of a healthy lifestyle (including ICHAP)
- 2.2 Develop and implement the school health program: including health promotion, nutrition, oral health education, rheumatic heart disease, immunization.
- 2.3 Strengthen breastfeeding counseling and education to community nurses to convey the benefits of breast milk to women in the villages
- 2.4 Strengthen access to mental health services
- 2.5 Improving health services targeted towards people with disabilities relating to NCDs

²³Ministry of Health, 2016, *Samoa National Health Accounts FY2014-2015*, Apia, Samoa.p. 35.

²⁴*Samoa National NCD Cost Analysis Study*, 2017, Institute for Health Policy, Colombo, Sri Lanka & the Centre for Health Information Policy and Systems Research, Fiji National University, Suva Fiji,

²⁵Ibid

KSA 3: Health System Strengthening to address NCDs.

- 3.1 Strengthening health system through improvement of infrastructure
- 3.2 Strengthen workforce development and capacity building for NCD management, prevention and control.
- 3.3 Integrate and scale-up NCD awareness and screening
- 3.4 Strengthen referral systems for management of NCDs
- 3.5 Improve overall systematic planning of procurement of essential drugs, diagnostic equipment and supplies.
- 3.6 Ensure the patients that are referred are followed-up in terms of treatment, management, and outcome.
- 3.7 Integrate cervical, breast, prostate cancer screening into NCD programs

KSA 4: Surveillance, Monitoring and Evaluation.

- 4.1 Strengthen national NCD registration systems in particular registries for cancer, mental illness (suicide), injury and disability registries
- 4.2 Strengthen vital and civil registration systems to improve medical cause of death in reporting
- 4.3 Strengthen Monitoring & Evaluation System on NCDs.
- 4.4 Enforce policies and legislations to promote healthy lifestyle

KSA 5: Climate change, disaster preparedness and NCDs.

- 5.1 Strengthen health and climate change action plan
- 5.2 Strengthen emergency response to NCD risks associated with climate change

10. MONITORING AND EVALUATION

Monitoring and evaluation (M&E) is about tracking, collecting, storing, analyzing and finally transforming data into strategic information so it can be used to make informed decisions for program management and improvement, policy formulation and advocacy. It is conducted to ensure 'quality, effectiveness and safety of what is delivered in hospitals, hospital wards, community clinics and in health promotion.'²⁶

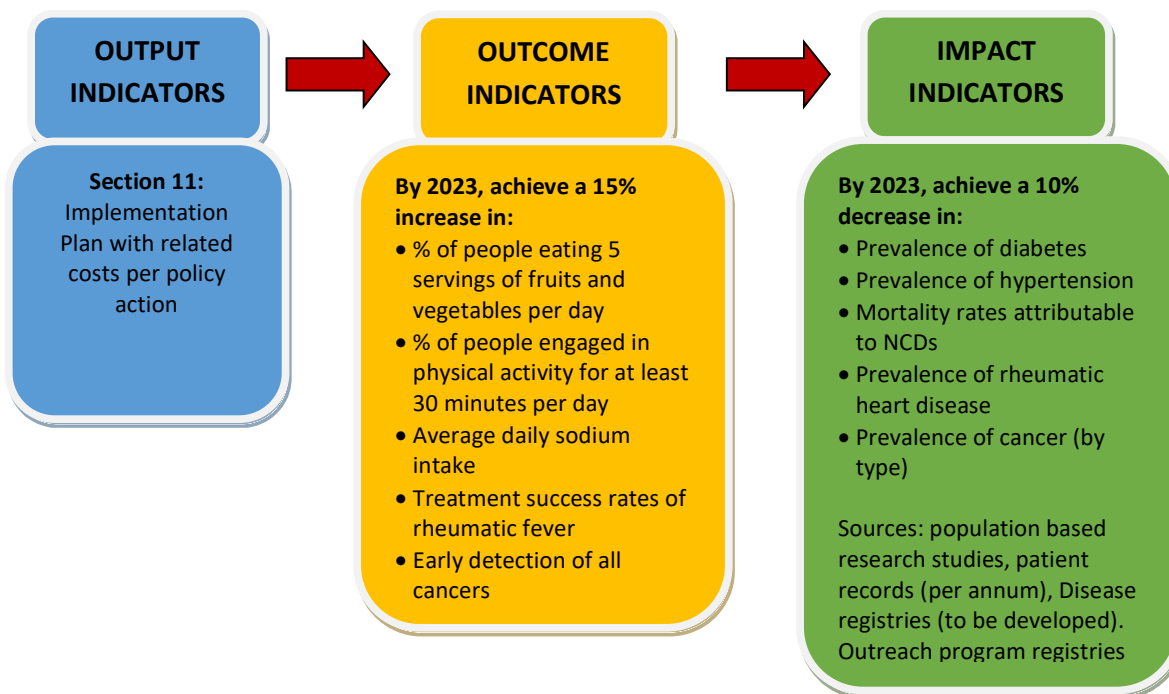
Monitoring and evaluation will measure progress toward achieving the goals, objectives and strategies of the NCD Control Policy. This will be done in two ways: firstly by measuring progress against the indicators of the policy and secondly by the M&E Framework in relation to the NCD Strategic Action Plan. There will be a number of activities in progress at any given time to realize the outputs as identified to address the given priorities emphasized in this Plan.

The indicators of an M&E framework are linked together by a chain of results. In this chain, **inputs** (resources) are mobilized to implement programs which result in **outputs** (which are the immediate results of an activity, such as services delivered or people reached). The outputs of programs then result in changes of the behaviour or characteristics of the population, which are described in **outcome** indicators. Ultimately, once the behaviour of a population changes, the total rate of disease, morbidity or mortality reduces. The broad level

²⁶Ministry of Health, 2008, *Health Sector Plan 2008 – 2018*, Apia, Samoa.

measure of the health issue or disease is captured in this **impact** indicator. Impact indicators measure the overall health issue we are looking to address.

The figure below shows the chain of results as it relates to the NCD policy. The implementation plan in the following page describes the key areas, actions and indicators that are aligned to achieving these Impacts and Outcomes for the policy period.



The Strategic Planning Policy and Research Division (SPPRD) the Health Sector Coordination, Resourcing and Monitoring Division (HSCRMD) are responsible for the review of the policy, however it is highly recommended that an independent evaluator is sought to conduct this assessment to measure how well the sector is performing in terms of progress against the indicators, provide an unbiased view of the policy implementation, identify potential for improvement, produce actionable, realistic, results-oriented and concrete recommendations specifically for the remaining term (years) of the policy.

The full-term policy review shall be conducted at the end of the 5-year plan. This report will assess the achievements in meeting objectives and goals and provides a status report on each individual indicator. For an independent evaluation of the policy, a technical consultant is required to prepare this report for the Ministry of Health, and for the relevant information of interested parties such as government ministries and development partners.

11. NCD STRATEGIC ACTION PLAN 2018-2023

KSA 1: Governance, Leadership and Partnership.							
Action Areas	Key Milestones/Actions	Indicators	Baseline	Target	Responsible	Costing for 5 years (SAT)	Source of Funds
1.1 Establish multi-sectoral mechanisms to plan, guide, monitor and evaluate and enact NCD multi-sectoral plans, policies and legislations.	1.1.1 Revive National NCD Committee to provide multi-sectoral support and monitoring NCD action plan.	Number of meetings convened	1	4 meetings a year	MOH and sector partners	\$8,000	WHO GoS WB
	1.1.2 Establish National Food and Nutrition committee as per Food Act 2015.	Number of meetings convened TOR developed and endorsed	0	By 2018/19 4 meetings per year	MOH and sector partners	\$8,000	WHO GoS
	1.1.3 Establish a multi-sectoral National Alcohol Coordinating and Control Committee	Number of meetings convened TOR developed and endorsed	0	2 meetings per FY	MOH and sector partners	\$8,000	WHO GoS
	1.1.4 Conduct National Physical Activity Committee meetings	Number of meetings convened	4	4 meetings per FY	MOH and sector partners	\$8,000	WHO GoS
	1.1.5 Conduct National Tobacco Control Committee meetings	Number of meetings convened	4	4 meetings per FY	MOH and sector partners	\$8,000	WHO GoS
	1.1.6 Conduct National Health Promoting School Networking Group meetings	Number of meetings convened	4	4 meetings per FY	MOH and sector partners	\$8,000	WHO GoS
1.2 Strengthen partnerships with health service providers of NCD health screenings and counseling	1.2.1 Establish partnerships with private to provide NCD health screenings and counseling under Public Private Partnerships.	Number of service agreements with health service providers	3 SA with GOSHEN, Samoa Cancer Society and Samoa Red Cross	1	MOH and sector partners	\$650,000	GoS

1.3 Strengthen partnership to promote healthy lifestyles in communities.	1.3.1 Establish partnerships with sports agencies and other recreational programs to provide health promotion activities in communities.	Number of sports bodies working in partnership with the Ministry of Health	4 (Samoa Netball Association, Samoa Touch Association, Samoa Tennis Association and Samoa Boxing Association)	1	MoH	\$200,000	GoS WB
	1.3.2 Conduct a Health and Media consultations to strengthen the relationship between media and the Ministry of Health	Number of Health Media Consultations	0	2 sessions per year	MOH and Media	-	
1.4 Strengthen policies and legislations for NCDs	1.4.1 Conduct review and develop the National Food and Nutrition Policy	Review report conducted New Policy in place	1	1 Review Report and 1 new policy	MOH and stakeholders	\$30,000	WHO GoS
	1.4.2 Conduct review and develop the National Tobacco Control Health Policy	Review report conducted New Policy in place	1	1 Review Report and 1 new policy	MOH and stakeholders	\$30,000	WHO GoS
	1.4.3 Conduct review and develop the National Mental Health Policy	Review report conducted New Policy in place	1	1 Review Report and 1 new policy	MOH and stakeholders	\$30,000	WHO GoS
	1.4.4 Conduct review and develop the National Health Promotion and Prevention Policy	Review report conducted New Policy in place	1	1 Review Report and 1 new policy	MOH and stakeholders	\$30,000	WHO GoS
	1.4.5 Develop Infant and Young Child Feeding Regulations	New regulation in place	0	1 regulation in place	MOH and stakeholders	\$30,000	WHO GoS
1.5 Strengthen Leadership, Political Commitment and	1.5.1 Revive SPAGHL through deliberations with parliamentarians	SPAGHL re-established	4 meetings and 2 visits	By FY19/2020	MOH and stakeholders	\$50,000	WHO GoS

Coordination.	1.5.2 Promote Health in All Policies in other sectors with a focus on NCD prevention and control	Health in all policies mechanism recognised in other sector planning frameworks		Ongoing	MOH	-	
	1.5.3 Conduct Health Advisory Committee (Komiti Faufautua) meetings	Monthly meetings	12 meetings per year	12 meetings	MOH	\$500,000	GoS
1.6 Strengthen partnership with Education Sector	1.6.1 Mandate Physical Education and Health Curriculum in all schools	Number of public schools implementing physical education and health		All public schools	MoH, MoE, MYS	-	
	1.6.2 Review national physical activity guidelines	Guidelines developed and reviewed	1	1	MOH	\$30,000	WHO GoS

KSA 2: Health Promotion, Advocacy and Risk Reduction.

Action Area	Key Milestones/Actions	Indicators	Baseline	Target	Responsible	Costing for 5 years (SAT)	Source of Funds
2.1 Strengthen NCD awareness and physical activity programs in communities to promote the importance of a healthy lifestyle (including ICHAP)	2.1.1 Increase coverage of multi-media campaigns for NCDs and risk factors including -mental health, cancer, injury, disability, and suicide -smoking, nutrition, alcohol and physical activity (SNAP)	Percent of people that understand NCDs and its detrimental effects on health Number of TV, Radio, Newspaper Spots and Print Media.	491community participants (ICHAP 2017)	600 minimum number of individuals participated with NCD Awareness program annually	MoH and relevant Health Sector Partners	\$1,250,000	WHO GoS
	2.1.2 Conduct community awareness consultations and educational campaigns	Percent of people that eat 5+ servings of fruits and vegetables daily	8.4% (STEPS 2013)	20% of people that eat 5+ servings of	MoH, SBS, WHO	\$100,000	WHO GoS WB

				fruits and vegetables daily					
		Percent of children at primary school eat 5+ servings of fruits and vegetables	0	30% of children at primary school that eat 5+ servings of fruits and vegetables daily	MOH				
		Number of people that understand the MOH Slash the Salt Campaign	90% (Salt Survey Report 2015)	Mean population intake of <5 grams of salt per day	MoH			\$25,000	GoS
	2.1.3	Conduct Physical Activity Expo	Number of Physical Activity Expos organized	1 Physical Activity Expo in 2017	1 minimum Physical Activity Expo per year	MoH	\$350,000	WHO GoS	
	2.1.4	Conduct Physical Activity programs within the community	Number of physical activity programmes implemented and sustained in the community, youth and churches.	65 villages Savaii; 73 villages Upolu	At least 10 % of physical activity programs implemented and sustained in the community	MOH	\$440,000	WHO GoS WB	
2.2	Develop and implement the school health program: including health promotion, nutrition, oral health education, rheumatic heart disease, immunization	2.2.1	Increase health screening and referrals among public school students	Number of students with their BMI's monitored	19.2% obese 13-15 years old (GSHS 2011) 51.7% overweight 13-15 years old (GSHS 2011)	At least 10% reduction of obese and overweight children in primary school	MoH, MESC	\$500,000	GoS WHO WB

			Screening coverage of primary school students for rheumatic heart disease		95% of screening coverage for Year 1&2 students	MoH, MESC	\$2,500,000	GoS
	2.2.2	Conduct oral health education and treatment program in primary schools	Percentage of oral health school programs and visits for all primary schools	20 primary schools	At least 50% of all primary school screened on an annual basis	MoH, MESC	\$2,500,000	GoS
	2.2.3	Conduct immunization of school children	Percentage of school entry children fully immunized	50% of school entry children immunized	95% of school entry children fully immunized	MoH, MESC	\$2,500,000	GoS
2.3	Strengthen breastfeeding counseling and education to community nurses to convey the benefits of breast milk to women in the villages	2.3.1	Provide pregnant women with counseling and support for early exclusive breastfeeding for the first six months of life.	Percentage of mothers counseled at antenatal care clinics	M&E report on breastfeeding practise	MoH	\$100,000	GoS
		2.3.2	Conduct breastfeeding promotion campaigns	Number of villages/settings where campaigns have been conducted	Baby Friendly Initiative Project (Breastfeeding at workplace)	MoH	\$250,000	GoS WHO
		2.3.3	Implement the 10 steps of the Baby Friendly Initiative	Number of steps implemented	Baby Friendly Initiative Project 2012	MoH	\$250,000	GoS WHO
2.4	Strengthen access to mental health services	2.4.1	Provide mental health screening for all patients with chronic diseases	Number of patients with chronic diseases receiving mental health screening	STEPS Survey GOSHEN reports NHS Mental Health Unit reports	MoH	\$250,000	GoS WHO

2.5 Improving health services targeted towards people with disabilities relating to NCDs	2.5.1 Conduct health outreach programs targeted towards people with severe disabilities.	Number of people reached by outreach	National Policy for Person with Disabilities Mid Term Review Report 2011-16	At least 2 health outreach programs conducted every year	MOH, MWCSD and Partners	\$100,000	GoS WHO
	2.5.2 Procure assistive devices for NCD patients (such as amputees, stroke patients)	Percentage of eligible patients that receive assistive devices	Orthotics and Prosthetics Workshop	At least 85% of eligible patients receive assistive devices	MoH and Partners	\$2,500,000	GoS WHO

KSA 3: Health System Strengthening to Address NCDs

Action Area	Key Milestones/Actions	Indicators	Baseline	Target	Responsible	Costing for 5 years (SAT)	Source of Funds
3.1 Strengthening health system through improvement of infrastructure	3.1.1 Construction and upgrading of district hospitals: Identified RDHs and Referral Hospital to be constructed, upgraded and equipped: Sa'anapu, Falelatai, Falese'ela, Poutasi, Lalomanu, Satupaitea, Safotu, Sataua, Foailalo and MTII Hospital	MTII Hospital Ward constructed	3 RDHs construction completed (2006 - \$1.9million per RDH)) MTII Hospital upgrade (\$5.3million) completed except the wards (2012) Health Facilities Assessment 2018	100%	MoH, MoF, HPAC	\$2,200,000	GoS WHO
	3.1.2 Construction of accommodation quarters for the Multi-disciplinary teams where it is not available at the RDHs identified	Accommodation quarters for staff constructed	Nursing Hostel completed (2013)	100%	MoH, MoF, HPAC	\$1,500,000	GoS WB

	3.1.3 Upgrade and Extension of Public Health Laboratory (MoH)	Public health laboratory upgraded and equipped	2011 facility in place at new MoH HQs 2014 minimal tools provided under Health SWAp	To be completed by Year 1 of the Project	MoH, MoF, HPAC	\$150,000	GoS
3.2 Strengthen workforce development and capacity building for NCD management, prevention and control.	3.2.1 Establish multi-disciplinary teams stationed in rural district hospitals.	Number of rural district hospitals / health centers with a multi-disciplinary team in place according to defined Terms of Reference.	1	9	MoH, PSC, MoF	\$5,846,980	GoS WB
	3.2.2 Conduct training on NCD Screening Management Guidelines to Health service providers and communities	Proportion of Health service providers and communities (women's committees) trained on NCD Screening and Management Guidelines		100% health service providers and communities	MoH, Health Service Providers, Communities	\$60,000	GoS WB
	3.2.3 Conduct training for community representatives on PEN Fa'a Samoa provided with certificates	Proportion of community representatives with recognized certifications for PEN Fa'a Samoa training		100%	MoH, Health Facilities, MWCS	\$687,000	GoS WB
	3.2.4 Provide opportunities for short-term trainings and professional development provided for staff both local and overseas on prevention of HPV, cervical cancer, hepatitis, rheumatic fever and rheumatic heart disease.	Number of staff provided with trainings on prevention of HPV, cervical cancer, hepatitis, rheumatic fever and rheumatic heart disease	Specialised trainings by WHO	Ongoing	MoH	\$500,000	GoS WHO
	3.2.5 Increase support for human resources for mental health services	Number of staff recruited for Mental Health services increase	NHS (3 nurses and 1 doctor, no psychiatrist)	5 nursing staff, 1 permanent psychiatrist, psychologist, social worker	MoH, PSC, MoF	\$1,055,000	GoS
3.3 Integrate and scale-up NCD awareness and	3.3.1 Expansion of PEN Fa'a Samoa to all 241 rural villages in Samoa	Number of villages where PEN Faa Samoa has been rolled out	17 villages	224villages	MoH and WHO	\$1,639,155	GoS WHO

screening	3.3.2 Conduct NCD awareness and screening campaigns in urban villages	Number of adults screened and referred for NCD management	1 village	96 villages	MOH and WHO	\$677,922	WB
	3.3.3 Integration of NCD screening in health facility visits	Number of patients screened during health facility visits			MOH and WHO	Costs included in 3.5.3 which includes diagnostic equipment and supplies	
3.4 Strengthen referral systems for management of NCDs	3.4.1 Develop patient education/self-care guidelines for prevention and control of NCDs and develop protocols for NCD management and referral	Protocol and referral guidelines developed	NHS referral/ clinical reports	100%	MOH	\$110,000	
3.5 Improve overall systematic planning of procurement of essential drugs, diagnostic equipment and supplies.	3.5.1 Revise List of Essential Drugs for the Management of NCDs	Essential Drugs list revised	Draft EML 2015	Endorsed EML	MoH, Health Sector Partners	\$20,000	GoS WB
	3.5.2 Procure diagnostic equipment and supplies for NCD management at all district hospitals	Supplies procured and distributed to all health facilities	Pharmaceutical Division Reports	Ongoing activity	MoH, Health Sector Partners	\$3,412,333	GoS WB
	3.5.3 Procure Pharmaceutical Warehouse Management System	Information system set up at pharmaceutical warehouse	LOTS system	Upgraded system	MoH, Health Sector Partners	\$952,458	DFAT
3.6 Ensure the patients that are referred are followed-up in terms of treatment, management, and outcome	3.4.1 Scale up treatment and management of NCDs in district hospitals and community health centres	Proportion of NCD patients have acceptable levels of control	PEN Faa Samoa Report	At least 50%	MoH, Health Sector Partners	\$25,259,550	GoS WB
	3.4.2 Develop and sustain NCD Clinics in Savaii and Upolu	Samoa NCD Clinics developed and sustained in Savaii and Upolu	MOH Quality Assurance Report	100%	MoH, Health Sector Partners	\$2,500,000	GoS WB

	3.4.3 Sustain treatment and management of NCDs in the main referral hospitals MT2 and TTM hospitals	Sustainable operations and funding arrangements	0	100%	MoH, Health Sector Partners	\$166,000,000	GoS
3.7 Integrate cervical, breast, prostate cancer screening into NCD programs	3.7.1 Expand screening programs for cervical, breast and prostate cancer.	Number of people screened and referred for cancer management	Cancer Society data, Cervical cancer policy and strategy 2014	10% increase from baseline value	MoH and Partners	1,250,000	GoS

KSA 4: Surveillance, monitoring and evaluation.							
Action Area	Key Milestones/Actions	Indicators	Baseline	Target	Responsible	Costing for 5 years (SAT)	Source of Funds
4.1 Strengthen national NCD registration systems in particular registries for cancer, mental illness (suicide) injury and disability registries	4.1.1 Establish a national registry for NCD patients and high risk identified persons and update existing records	National NCD registry developed		At least 95% of NCD cases are registered by diseases	MoH	\$100,000	GoS WB
	4.1.2 Develop registry for people with disability and special needs.	Disability registry developed	MWCSD data, NOLA, MESC, Fia Malamalama Loto Taumafai, Senese	At least 95% of disability are registered by diseases	MoH, Health Sector Partners		GoS
	4.1.3 Pilot patient tracking system for hypertension and diabetes in selected district hospitals and expand the registry system to all rural district hospitals and health centres	Number of hospitals piloting the hypertension and diabetes registry	PATIS	100%	MoH	\$50,000	GoS ADB WB
	4.1.4 Establish appropriate hospital-based surveillance through collection of routine data on NCDs track patients.	Number of hospitals reporting NCD indicators	PATIS	100%	MoH	-	GoS ADB
	4.1.5 Train health providers on electronic NCD registry	Number of staff trained	Local Training	100%	MoH	\$90,000	GoS WB

4.2 Strengthen vital and civil registration systems to improve medical cause of death in reporting	4.2.1 Train health workers on ICD10 and NCD surveillance reporting and certification of death	Number of people trained in ICD10 coding and reporting	Local and overseas training on surveillance and ICD10	100%	MoH	\$200,000	GoS
4.3 Strengthen Monitoring & Evaluation System on NCDs.	4.3.1 Conduct process monitoring of NCD activities in district hospitals	Numbers of patients in the NCD registry tracked and managed by rural district hospitals following standardized disease management protocols	0	At least 30% increase of NCD patients tracked in rural facilities per year.	MoH	\$1,000,000	GoS WB
	4.3.2 Utilize NCD passbooks for NCD patients and high-risk citizens as a backup system for patient information tracking	Passbook distributed and utilized	0	All NCD patients receive passbook	MoH	\$1,810,830	GoS WB
	4.3.3 Publish periodic report on progress made in NCD prevention and control including reporting on key national targets.	Assessment reports published annually	Health Sector Plan Mid-Term Review Report		MoH	\$100,000	GoS
4.4 Enforce policies and legislations to promote healthy lifestyle	4.4.1 Implement the provisions stipulated in the Food Act 2015 and Food Regulations 2017	Percentage of food handlers issued with a health card	MOH Spot Check Inspections	At least 90% food handlers issued with a health card	MoH	\$1,250,000	GoS
		Percentage of food premises complying to food safety and labeling	MOH Spot Check Inspections	At least 60% of inspected regulated food complying with labeling requirements	MoH		GoS
	4.4.2 Implement the National Alcohol Control Policy 2017-2022	Policy implementation completed	0	At least 50% of policy actions implemented	MOH and sector partners	\$50,000	GoS
	4.4.3 Increase excise tax on sugary drinks, salty foods and foods high in fat.	Report stating marked increase in excise tax on unhealthy foods	5% (sugary food products)	At least 65% increase of excise tax on unhealthy foods	MoH, MfR	-	GoS

	4.4.4 Enforce the implementation of the Tobacco Control Act 2008 and Regulations.	Percentage of manufacturers and retailers complying with Tobacco Control Act 2008 and Regulations	40% (MoH Monitoring Report 2017)	At least 72% compliance of manufactures and retailers	MoH, MoF	\$1,250,000	GoS
		Percentage of public places such as workplaces, night clubs, and schools complying with “smoke-free area” policy and legislation	100% of workplaces and restaurants (MoH Monitoring Report 2017) 79% in schools (MoH School Monitoring Report 2017)	At least 80% of all public places comply with policy and legislation	MoH		GoS
		Number of manufacturers, importers, distributors, hotel owners and night club owners complying with licensing fees regulations		100% of licensing fees paid	MoH, MoF, MfR		GoS
	4.4.5 Assess the tax structure and impact of increase in excise and tax on tobacco products.	Evaluation of impact of tobacco taxes on consumption	0	Study on assessing the impacts of increasing taxes on tobacco	MOH, MOF, MfR	\$120,000	GoS WB

KSA 5: Climate Change, disaster preparedness and NCDs							
Action Area	Key Milestones/Actions	Indicators	Baseline	Target	Responsible	Costing for 5 years (SAT)	Source of Funds
5.1 Strengthen health and climate change action plan	5.1.1 Review and develop Climate Adaptation Strategy and Action Plan for Health for 2019 – 2024.	Strategy and action plan developed	1	1 review report and 1 new strategy	MOH and Outcome 7 Group	\$50,000	GoS
5.2 Strengthen emergency response to NCD risks associated with climate change	5.2.1 Provide training to health workforce on climate change and NCD risks.	Health workforce number increased, trained and up skilled	1	All health work force	MoH, Health Sector Partners	\$120,000	GOS WB
	5.2.2 Conduct emergency simulations and drills focusing on safety of NCD patients (medications and dietary needs).	Number of drills implemented within the financial year Pharmaceutical storage component for all rural district hospitals.	1 drill in satupaitea savaii in 2011 0	2 drills per year	MoH, MNRE	\$170,000	GOS
	5.2.3 Consultation meetings to be undertaken by the Outcome 7 Group to ensure that disaster risk management activities are in harmony with NCD activities	Number of consultation meetings held	2	At least 2 meetings per year	MoH, MNRE, sector partners	\$50,000	GOS

TOTAL BUDGET OF THE NCD ACTION PLAN:		
KSA 1	Governance, Leadership and Patnership	\$ 1,628,000.00
KSA 2	Health Promotion, Advocay and Risk Redcution	\$ 13,615,000.00
KSA 3	Health System Strenthening to adress NCD	\$ 213,570,398.00
KSA 4	Surveillance, Monitoring and Evaluation	\$ 6,020,830.00
KSA 5	Climate Change, Disaster Preparedness and NCDs	\$ 390,000.00
TOTAL		<u>\$ 235,224,228.00</u>

12. GLOSSARY²⁷

- **Acute care** – is concerned with short-term or severe illness of brief duration.
- **Asthma** – is a chronic lung disease that inflames and narrows the airways in the lungs.
- **Binge Drinking** – the consumption of an excessive amount of alcohol in a short period of time.
- **Body Mass Index** – is a screening tool for overweight or obesity. BMI is a person's weight in kilograms divided by the square of height in meters. A high BMI is an indicator of high body fatness.
- **Bronchitis** – is an inflammation or swelling of the bronchial tubes (bronchi), the air passages between the mouth and nose and the lungs.
- **Cancer** – is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. Not all tumors are cancerous; benign tumors do not spread to other parts of the body.
- **Cardiovascular Disease** – generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke.
- **Chronic care** – refers to medical care which addresses pre-existing or long-term illness.
- **DALY** – the *Disability-Adjusted Life Year* is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.
- **Diabetes Mellitus** – a chronic disease caused by inherited and/or acquired deficiency in production of insulin by the pancreas, or by the ineffectiveness of the insulin produced. Such a deficiency results in increased concentrations of glucose in the blood, which in turn damage many of the body's systems, in particular the blood vessels and nerves.
- **Diastolic Blood Pressure** – indicates the arterial pressure during the interval between heartbeats.
- **Emphysema** – is a long-term, progressive disease of the lungs that primarily causes shortness of breath due to over-inflation of the alveoli (air sacs in the lung).
- **Human Papilloma Virus** – is a viral infection that is passed between people through skin-to-skin contact.
- **Hypertension** – also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure.
- **Hyperosmolality** – an increase in the osmolality of the body fluids.
- **Ischemic Heart Disease** – also known as coronary heart disease is when the coronary arteries become narrowed by a gradual build-up of fatty material within their walls. These arteries supply the heart muscle with oxygen-rich blood.
- **Ketoacidosis** – is a serious complication of diabetes that occurs when the body produces high levels of blood acids called ketones. The condition develops when the body can't produce enough insulin.
- **Malnutrition** – a condition that develops when the body does not get the right amount of the vitamins, minerals, and other nutrients it needs to maintain healthy tissues and organ function.
- **Neonatal Mortality** – death during the first 28 days of life (0-27 days).

²⁷All definitions are sourced from the World Health Organization.

- **Obesity** – BMI range at 30.0 or higher.
- **Osmolality** - the concentration of a solution in terms of osmoles of solutes per kilogram of solvent.
- **Palliative care** – is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.
- **Peripheral circulatory complication** – is a slow and progressive circulation disorder caused by narrowing, blockage, or spasms in a blood vessel.
- **Psychosocial** – looks at individuals in the context of the combined influence that psychological factors and the surrounding social environment have on their physical and mental wellness and their ability to function.
- **Renal failure** – or kidney failure is a medical condition of impaired kidney function in which the kidneys fail to adequately filter metabolic wastes from the blood.
- **Rheumatic Heart Disease** – is damage to one or more heart valves that remains after an episode of acute rheumatic fever (ARF) is resolved. It is caused by an episode or recurrent episodes of ARF, where the heart has become inflamed.
- **Stroke** – a condition that occurs when the blood supply to the brain is interrupted or reduced. This deprives the brain of oxygen and nutrients, which can cause brain cells to die.
- **Systolic Blood Pressure** – indicates the maximum arterial pressure occurring during contraction of the left ventricle of the heart.

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14. ANNEXES

ANNEX 1: Policy Legislative Framework

Regional and International Conventions

Plan	Aim
Framework Convention on Tobacco Control 2003	One of 15 countries selected worldwide as a FCTC partner party; Implement new tobacco laws that increase tobacco taxes, fund cessation programs for the first time in the country's history; develop a rigorous and evidence-based tobacco control policy for 2017-2021 that provides tobacco cessation programs and education in both the public and private sectors
Sustainable Development Goals 2015	A set of 17 global goals with 169 targets between them. NCDs is recognised as a major challenge for sustainable development. Targets included 1) reducing premature mortality from NCDs by one third; 2) strengthen responses to reduce the harmful use of alcohol; 3) achieve universal health coverage; 4) strengthen the implementation of the WHO FCTC; 5) support research and development of vaccines and medicines for NCDs and 6) provide access to affordable essential medicines and vaccines for NCDs.
2015 Yanuca Island Declaration on Health in Pacific Island Countries.	Healthy islands should be places where; children are nurtured in body and mind; environments invite learning and leisure; people work and age with dignity and ecological balance is a source of pride.
S.A.M.O.A Pathway 2014	Reaffirmed commitments to multiple UN programs and commitments to sustainable development; promote social justice, reduction of inequities and providing opportunities for all people to live healthy lives.
NCD Roadmap for the Pacific Region 2014	Identifies NCDs as a health argument, an economic argument and a political argument. The <i>NCD Roadmap Report</i> serves as a background resource document for officials to review the latest evidence about the economic and financial implications of responding to the NCD crisis in the Pacific.
UN Political Declaration on NCDs 2011	Global collaboration amongst member countries – reflected increasing recognition of the urgency and priority of addressing the growing threat posed by NCDs.
UN NCD Resolution 2010	Worldwide collaboration to address NCDs
Global Strategy to Reduce the Harmful Use of Alcohol 2009	Ten areas for action identified; 1) leadership, awareness and commitment; 2) health services' response; 3) community action; 4) drink-driving policies and countermeasures; 5) availability of alcohol; 6) marketing of alcoholic beverages; 7) pricing policies; 8) reducing the negative consequences of drinking and alcohol intoxication; 9) reducing the public health impact of illicit alcohol and 10) monitoring and surveillance.
WHO NCD Action Plan 2008	Addressed the need to prevent and control NCDs; focused on ways to minimize the NCD risk factors such as tobacco use, physical activity, nutrition and alcohol use.
WHO Global Strategy on Diet, Physical Activity and Health 2004	To promote and protect health by guiding the development of an enabling environment for sustainable actions at individual, community, national and global levels that, when taken together, will lead to reduced disease and death rates.

Pacific Islands Health Ministers Declaration on Healthy Islands	Commitment to the Healthy Islands vision; children are nurtured in body and mind; environments invite learning and leisure; people work and age with dignity; ecological balance is a source of pride, and; the ocean which sustains us is protected.
WHO Global Strategy for Infant and Young Child Feeding	To improve through optimal feeding, the nutritional status, growth and development, health and thus the very survival of infants and young children.

Laws and Legislations

Law	Aim
Ministry of Health Act 2006	Establishes and define the functions and powers of the Ministry of Health, which is the regulatory, policy maker and funder role for the Health Sector.
Pharmacy Act 2007	Establish professional standards for pharmacists, pharmacy assistants and pharmacy technicians.
Mental Health Act 2007	Establishes protocols on how to support and treat individuals who have mental disorders.
Tobacco Control Act 2008 & Tobacco Control Regulations 2013	Increased tobacco taxation; increased licensing fees; banned store displays; regulation of electronic cigarettes; prohibit smoking in government ministries, vehicles and public places.
Liquor Act 2011	Penalties for serving or selling alcohol to underage individuals; penalties for serving alcohol to intoxicated individuals; license requirement to sell alcohol, with ability to monitor and enforce violations.
National Health Services Act 2014	The NHS Act 2006 established the roles and functions of the NHS. The NHS Act 2014 was an amendment.
Health Promotion Foundation Act 2014	Establishes the roles and functions of the Health Promotion Foundation
National Kidney Foundation of Samoa Act 2015	Establishes the roles and functions of the NKFS
Food Act 2015	Ensure food is safe to consume; improve nutrition; clear labeling rules; gives the Director General (DG) the power to close a place of business if it poses a threat to public health; regulation of salt, sugars or fats in food.

Policies and Strategies

Policy/Strategy	Aim
Strategy for the Development of Samoa FY2016/17-FY2019/20	Identifies the four priority areas of development and 14 key outcomes to be achieved for Samoa over the next four fiscal years.
Samoa Population Policy 2016	A framework for action to coordinate efforts to manage the impacts of population change in Samoa. Key areas includes fertility, migration, health and education, the environment, and the provision of safe drinking water, sanitation services and energy.
National Alcohol Control Policy 2016-2021	Provides the overarching strategy to guide implementation relating to the reduction of alcohol-related risks such as diseases, injuries as well as social and economic impacts.
Samoa Climate Adaptation	A framework to monitor, communicate and prepare for changing climate health risks. The scope of this framework focuses on

Strategy for Health 2014	three broad objectives; 1) strengthen the capacity of the health sector to improve risk management and response to disasters, emergencies and climate change; 2) ensure that health concerns are addressed in decision in other sectors to reduce risks from climate change and 3) increase public awareness of the health consequences of climate change.
National Health Prevention Policy 2013-2018	Prioritises prevention against targeted areas and across multiple settings by integrating evidence based recommendations and actions that can reduce the burden of leading causes of preventable death and major illness.
National Food and Nutrition Policy 2013-2018	Provides the framework that facilitates and support action through the food and nutrition system (food production, processing, distribution, nutrition knowledge and food consumption, sanitation, as well as preventive health actions) to achieve better nutrition and health outcomes for Samoa.
National Child and Adolescent Health Policy 2013-2018	Identifies key thematic areas of focus in improving child and adolescent health. It provides tactical suggestions on reducing the rates of child obesity, malnutrition, improving dental health and screenings for early detection of RF and RHD
National Sexual and Reproductive Health Policy 2011-2016	The aim of the policy is to serve as an effective national platform for strengthening sexual and reproductive health activities in Samoa and facilitating the achievement of relevant international and regional goals in the interest of improved health, wellbeing and overall quality of lives for all people in Samoa.
Health Sector Plan 2008-2018	Reflects national health priorities at present and in the immediate future. The 5 goals for the health sector includes 1) strengthening health promotion and prevention programs 2) developing skilled human resources 3) improving health facilities and equipment 4) financing health services and 5) strengthening the Ministry to realize the Government's overall vision of "For every Samoa to Achieve a Better Quality of Life."
Mental Health Policy 2006	1) Strengthen the comprehensive community based programs 2) provide evidence-based and cost-effective treatment on mental health care 3) promote good mental health into general health care 4) integrate mental health into general health care 5) promote mental health through sectoral and inter-sectoral initiatives and nurture the physical and mental well-being of Samoans
National Health Promotion Policy 2010-2015	Stems from the Healthy Islands Concept articulated within the Yanuca Island Declaration which further articulates the implementation of health promotion within other settings including Healthy Hospital, Healthy Markets & Health Promoting Schools.
Salt Reduction Strategy 2014-2016	Salt reduction as one of the "best buys" for reducing the burden of NCDs.
Cervical Cancer Screening Policy 2013-2015	Aims to enable a wide group of stakeholders to become aware of the local burden of disease, set priorities for prevention and control based on proven strategies and work to allocate sufficient funding to achieve targets.
Disaster Risk Management Strategy 2017	The main purpose of this strategy is to enhance knowledge, abilities and capacities at all levels for disaster prevention, preparedness, response and recovery within the Health Sector.

ANNEX 2: Current Interventions for NCD control

1. *Package of Essential NCD Interventions (PEN Fa'a Samoa)*²⁸

The Package of Essential Noncommunicable Disease Interventions (PEN) Fa'a Samoa is a Ministry of Health Program that has adapted World Health Organization (WHO) protocol to suit the local Samoan context. The program was piloted in two villages and then expanded across the islands of Upolu and Savaii. The PEN protocols and guidelines empower local village women's committees to provide important non-communicable disease (NCD) screenings and health interventions.

Stakeholder engagement is critical to the success of PEN Fa'a Samoa. A national steering committee has been organized to guide the development and implementation of the project. The committee consists of the Ministry of Health, the National Health Service, as well as the World Health Organization. Additionally, partnerships with the Ministry of Women Community and Social Development and the community members has improved program participation and increased the number of screenings performed. PEN Fa'a Samoa is founded on three pillars:

- Pillar One: NCD early detection
- Pillar Two: NCD management
- Pillar Three: NCD awareness in the community

2. *First 1000 Days Nutrition Program*

The 1,000 days between a woman's pregnancy and her child's 2nd birthday offer a unique window of opportunity to build healthier and more prosperous futures. It is why it is critical that women and children get the right nutrition during this time.

The importance of nutrition in early brain development

The first 1,000 days of life –the time spanning roughly between conception and one's second birthday is a unique period of opportunity when the foundations of optimum health, growth, and neurodevelopment across the lifespan are established. Yet too frequently in developing countries, poverty and its attendant condition, malnutrition, weaken this foundation, leading to earlier mortality and significant morbidities such as poor health, and more insidiously, substantial loss of neurodevelopment potential. As a species, we have come from a history of "malnutrition" being synonymous with "under nutrition" - the serious lack of obtaining even adequate amounts of nutrition.²⁹

3. *Health Promoting Schools*

An effective school health program can be one of the most cost effective investments a nation can make to simultaneously improve education and health. WHO promotes school health programs as a strategic means to prevent important health risks among youth and to engage the education sector in efforts to change the educational, social, economic and political conditions that affect risk.³⁰ The Health Promoting School Programme is coordinated by the Ministry of Health through the Health Promoting School Network which includes MESC, MWCSO, MAF, NHS, MOP, SWA, MNRE, SRC, SFHA, LTA, NCC, SVSG. Health Promoting School Standards include 6 key components which are

²⁸Ministry of Health, 2017, *PEN Fa'a Samoa Expansion Program Progress Report March 2016 – May 2017*, Apia, Samoa.

²⁹United Nations Children's Fund, (n.d), *The First 1,000 days of life*, retrieved on the 20th June 2018 from <https://www.unicef-irc.org/article/958-the-first-1000-days-of-life-the-brains-window-of-opportunity.html>

³⁰World Health Organization, (n.d), *School Health and Youth Health Promotion*, retrieved on the 20th June 2018 from http://www.who.int/school_youth_health/en/

School Policy, Safe learning environment (social and physical environment), Nutrition Standards , Water and Sanitation, Tobacco Free environment, First Aid Kits, Health Promoting Tools and Community Support. Inclusive of this program is a

- Schools Nutrition Guideline developed and implemented in the schools
- School Monitoring to ensure compliance to safety and health standards

4. *Samoa Cancer Society (SCS)*

The main responsibility of the Samoa Cancer Society is reducing the number of people being diagnosed with cancer in Samoa. The Samoa Cancer Strategic Plan has clear objectives/goals for the Society's role in cancer control. The SCS leads the way in the campaign for awareness, prevention and early detection. Their Pinktober initiative of wearing pink in October raises awareness of breast cancer. The shave or dye campaign is a tribute to all who have lost their battle with cancer.

5. *Eat a Rainbow Campaign*

The Eat a Rainbow concept is widely accepted globally by Health Professionals and Health Organisations and Societies. It is a catchy phrase to remind the public about the importance of eating 5 plus servings of fruits and vegetables each day, and also to encourage a variety of fruits and vegetables for greatest health benefits. This is due to the variety of vitamins, minerals and antioxidants as well as other phytochemicals which have preventive health benefits from Non Communicable Diseases.

The recommendation is to eat at least 5 servings of fruits and vegetables on a daily basis or at least 35 servings a week. According to the Samoa Demographic and Health Survey (DHS) 2014, it showed that the number of Men and Women consumed less than 10 servings per week this equates to eating 1 serving per day, which is significantly lower than the 5+ servings per day recommended by the Nutrition Section of the Ministry of health. Fruit and vegetables fall into five different colour categories: red, purple/blue, orange, green and white/brown. Fruits and Vegetables are rich with Vitamins and Minerals and each colour carries its own set of unique disease fighting chemicals called phytochemicals. It is these phytochemicals that give fruits and vegetables their vibrant colour and of course some of their healthy properties.

6. *Beat NCDs / Diabetes by 2023*

The Honorable Prime Minister Challenge to the Country on World Health Day 2016 was to "Beat Diabetes by 2023" with its main objectives and vision to reduce the incidence and prevalence of Type 2 Diabetes by 2023.

7. *GOSHEN*

Goshen Trust Mental Health Services Samoa was established in 2009. It is a not for profit organisation whose main goal is to provide support and care to people who suffer with a mental health problem and their families. Their key activities include (i) Residential treatment facilities; (ii) Community support to families; and (iii) Up-skilling community members in mental health care. People who benefit from Goshen's Services are families and patients who suffer with mental health problems. Goshen is currently working with families of those who are suffering and those who are referred from the Mental Health Unit at Tupua Tamasese Meaole Hospital (TTM).

8. *Nobesity Samoa*

This initiative was established by One Touch Ministry targeting children to be inspired and guided in the path of nutritionally balanced and healthy lifestyle. The objectives

include instilling a sense of healthy lifestyle amongst children from their early age; educating parents and children on the value of good nutrition; Supporting the Ministry of Health's strategic goal of reducing Child Obesity as a preventive measure to reduce the exponential possibility of Samoa's future generations face an epidemic of non-communicable diseases like hypertension, diabetes and eventually cardiac problems; eliminating at a young age bad eating habits; and exercising self-development through assisting them into making better choices which results in better living.

9. *National Kidney Foundation*

National Kidney Foundation of Samoa was officially opened in March 2005 to concentrate mainly on providing healthcare for renal patients who needs to be dialyzed. This service is ongoing and had been extended to the island of Savaii with the belief that what is good for Upolu is also good for Savaii. Taking dialysis service to Savaii had lightened the accessibility burden by the population resided in Savaii in terms of transport and treatment costs.

10. *National Health Service (NHS) Mobility Device Service (MDS)*

The MDS was established as part of the Samoa Integrated Mobility Device Service (SIMDES) project. SIMDES is a four year (2014 - 2018) collaboration between the NHS, Nuanua O Le Alofa (NOLA) and Motivation Australia, funded by the Australian Government. The MDS is currently providing wheelchair, walking aid and Diabetic Foot Clinic services for Samoans with a mobility disability. Prosthetics and Orthotics (P&O) services have also been established at the NHS.

11. *Dr. Vermeulen's Plant-based Diet*

M.E.T.I under the guidance of Dr. Vermeulen conducts weekly Health Seminars focusing on weight loss, and getting rid of diabetes, heart disease and prevents or slows down cancer. The program is a plant-based diet, consisting of fruits, vegetables, tubers, whole grains, and legumes; and it excludes or minimizes meat (including chicken and fish), dairy products, and eggs, as well as highly refined foods like bleached flour, refined sugar, and oil. This plant based diet can help reduce the risk of developing chronic conditions like diabetes, obesity, and heart disease.

12. *Boot Camp – One Touch Ministry*

One Touch Ministry, a private and locally run program for healthy living, conducts a 10-week long boot camp weight loss program for registered members. During the course of the program, health education is provided in addition to the workout routines. This program continues to draw in people of all ages from all walks of life.

13. *Just Play – Samoa Football*

Just Play is a grass roots program developed by the Oceania Football Confederation in collaboration with the Football Federation of Samoa to promote physical activity in primary schools, and encouraging community involvement and healthy living. The program is designed for primary aged children from 6-12 years old. Programs are structured activities that enable children to play football at any time in any situation. Teachers and community members are trained to take the lead in this initiative with resources provided by the program.

14. *NCD Clinic*

The NCD Clinic formerly known as the Diabetes Clinic, located at Matagalalua was set up to service the community in the urban area diagnosed with diabetes. With the focus on secondary prevention of complications from diabetes, the clinic offers health education and promotional talks as well as counseling. The National Health Services (NHS) provides pharmaceutical services to the clinic.

15. *Integrated Community Health Awareness Program (ICHAP)*

ICHAP is a concept to raise awareness on HIV and STIs and TB under the Global Fund Program. However it is seen as an opportunity to drive NCD prevention and control awareness program at the community level. Integrated Community Health Approach Program (ICHAP) was series of health outreach programs conducted by the Ministry of Health in 2016-2018 with various multisectoral partners. Originally, ICHAP was first implemented in September 2016. The Samoa Red Cross Society (SRCS), the National Health Service (NHS), and the Ministry of Women, Community and Social Development (MWCSD) partnered with the HIV, STI, and TB National Program and the Health Education and Promotion team at the Ministry of Health.

The goal was to bring prevention education out into the communities on infectious diseases, NCD's, climate change resilience, maternal and child health, sexual health, and family wellness. All of these areas of health were integrated into one program to overcome the challenges posed by cultural and religious stigma of sensitive health issues which if delivered alone would not be as effectively received by the communities. Prevention and wellness messages were delivered together as a holistic approach to as a non-partisan way of uniting individuals and community structures in improving the health of villages. The ICHAP has since expanded its partner network to NGO's and has been implemented in villages, schools, prisons, youth groups, and church group settings.