SAMOA HEALTH SECTOR PLAN 2008-2018

FULL REVIEW REPORT

2018

MINISTRY OF HEALTH

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EXECUTIVE SUMMARY

The current sector plan for the health sector (Health Sector Plan 2008-2018) was officially launched on 31st January 2008 and will graduate in December 2018. This is the third sector plan for the health sector. The sector plan vision of a "Healthy Samoa" is very much aligned with the government of Samoa's objectives and outcomes highlighted in its three national strategies developed and implemented during the lifetime of the Health Sector Plan (HSP) 2008-2018. The three national strategies, Strategies for the Development of Samoa 2008-2012, 2012-2016 and FY2016/17 – FY2019/20 all aimed at improving health as part of improving the quality of life for Samoa's population and accelerate sustainable development.

The HSP 2008-2018 was developed and implemented to respond to four critical health challenges that were identified in the Situational Analysis conducted for the health sector in 2006. These challenges include:

(i) Rapidly increasing levels of non-communicable diseases;
(ii) Importance of reproductive and maternal and child health;
(iii) Emerging and re-emerging infectious diseases; and
(iv) Injury as a significant cause of death and disability

To ensure the effective implementation of the Health Sector Plan 2008-2018, the Health Sector Wide Approach (SWAp) program was also launched in 2008 to assist and support the Health Sector implement the HSP. This program was divided into three main components were:

(i) Health Promotion and Prevention;
(ii) Enhancement of Quality Healthcare Service Delivery; and
(iii) Strengthening Policy, Monitoring and Regulatory Oversight of the Health System

The Health Sector Monitoring and Evaluation Operational Manual was developed and officially launched in 2011 as a monitoring and evaluation tool to measure the performance of the health sector against its national strategic outcomes and indicators under the Strategy for the Development of Samoa for Financial Year 2016/17 – FY2019/20, as well as their performance against health indicators under the seven key health sector outcomes.

This review collates both quantitative and qualitative data to measure the sector's performance. The data were collected through various means and sources. These include consultations with various sector partners, literature reviews of health sector partner's annual reports, statistical bulletins, monitoring and evaluation reports, annual health sector review and health sector forum reports. The review pursues to enlighten changes over time and the factors that have contributed to and or hindered progress.

The evaluation of the sector's performance is categorized under three areas:

a) Health sector's performance against the health strategic outcomes and indicators in the Strategy for the Development of Samoa FY2016/17 – FY2019/20 Key Outcome 6;
b) Health sector's performance against the seven health key outcomes in the Monitoring and Evaluation Operational Manual 2011; and
c) Health sector's performance against the key components of the health system.

A. Health Sector's Performance Against Health Strategic Outcomes and Indicators in the Strategy for the Development of Samoa FY2016/17 – FY2019/20 Key Outcome 6

Strategic Outcome 1: Health promotion, protection and compliance improved

The indicators under this strategic outcome are related to the risk factors of non-communicable diseases. The baseline data was obtained from the results of the STEPS 2012 while the results from the STEPS 2013 were used to track progress. In 2013, the prevalence of lifestyles behavior was reported as follows:

↓ 12.4%	**Alcohol Consumption** **2002: 29.3%** **2013: 16.9**
↑ 11.30%	**PHYSICAL ACTIVITY** **2002: 49.8%** **2013: 61.1%**
↓ 13.3%	**SMOKING** **2002: 40.4%** **2013: 27.1%**

Strategic Outcome 2: Primary Healthcare improved

The baseline data for indicators under this strategic outcome were sourced from the Population Census 2011 and the update from the Census 2016 was used to track progress. The Infant Mortality Rate has increased by 0.8%. The Maternal Mortality Rate has significantly increased by 10.8%.

INFANT MORTALITY RATE	MATERNAL MORTALITY RATE
2011: 15.6 deaths per 1,000 live births	**2011: 40.2 deaths per 100,000 live births**
2016: 14.8 deaths per 1,000 live births	**2016: 51 deaths per 100,000 live births**

Since non-communicable diseases are identified as one of the health sector priorities in the current sector plan, the number of the population being screened for Non-Communicable Diseases is important. There were 23,302 people screened for non-communicable diseases from 138 villages covered by the Village Health Fair in 2010. This number does not include the population visiting the health facilities for general outpatients and the private diabetic clinic (Diabetic Association of Samoa clinic) that existed since 2008. The number of people screened is gradually increasing since the initiation of the PEN Fa'a-Samoa program in 2015. So far, the PEN Fa'a-Samoa program has been able to screen an additional 1,568 people from 2 villages in 2015, 1,126 people in 5 villages in 2016 and 1,033 people in 7 villages in 2017.

Strategic Outcome 3: Safety/Quality of Healthcare Services

Indicators under this Strategic Outcome relates to healthcare service provision. Baseline data for these indicators are obtained from various sources such as Ministry of Health Annual Reports, Ministry of Health Quality Assurance and Clinical Audit Reports and National Health Service Overseas Treatment Financial Year Reports. There has been an increase in the number of health care

professionals since 2015. This is a result of concerted efforts by the health sector to address workforce shortages through increasing opportunities for health targeted scholarships under the Samoa Scholarship Scheme, providing more training opportunities under health projects such as health sector wide approach program and WHO fellowships. There has been a decrease in the number of patients sent overseas for treatment from 307 patients in financial year 2014-15 to 167 in financial year 2015-16 but increase in spending. There has been an improvement on patients' waiting time in emergency. The concern is the increase in waiting time at the general outpatient and triaging as compared to emergency. In terms of healthcare professionals with their professional standards, only two healthcare professionals (pharmacists and allied health professionals) were able to meet the 100% compliance in 2016 and 2017. There is a need for a new health information system for the sector to address the issue experienced with the existing system i.e. PatIS so the challenge with health information is minimized and data can be validated to respond to the monitoring of health indicators.

Strategic Outcome 4: Management and response to disasters, emergencies and climate change improved

The sole indicator under this Strategic Outcome needs to be reviewed and reword in order for the progress to be measured. However, the health sector had performed well with the response to natural disasters and disease outbreaks that occurred within the lifetime of the Health Sector Plan 2008-2018. These include the public health response during the H1N1 influenza pandemic and tsunami in 2009; Cyclones Evans in 2012, Chikungunya outbreak in 2014, dengue fever outbreak in 2017, Cyclone Gita and typhoid fever outbreak in 2018.

With regards to the health sector's response to these national health strategic outcomes and indicators, few gaps were identified that need to be prioritized in the next sector plan for the health sector. These include reduce the prevalence of NCD risk factors (alcohol consumption and smoking) and decrease the numbers of maternal deaths.

B. Health Sector's performance against the Seven Key Outcomes of the Health Sector Monitoring and Evaluation Operational Manual 2011

Key Outcome 1: Improved healthy living through health promotion and primordial prevention

Similar to the Strategic Outcome of the SDS FY2016/17 – 2019/20 Key Outcome 6, indicators under this sector key outcome are related to health lifestyle behavior.

The baseline data was obtained from the results of the STEPS 2002 while the results from the STEPS 2013 were used to track the progress. The data for servings of fruits and vegetables were sourced from the DHS 2009 as baseline, and DHS 2014 to track progress. In 2013, the prevalence of lifestyles behavior is reported as follows:

LIFESTYLE BEHAVIOUR	STEPS 2002 * DHS 2009	STEPS 2013 * DHS 2014	PROGRESS
ALCOHOL	29.3%	16.9	REDUCE BY 12.4
SMOKING	40.0%	27.1%	REDUCE BY 13.3
PHYSICAL ACTIVITY	49.8%	61.1%	INCREASE BY 11.3%
2-3 SERVINGS OF FRUITS & VEGETABLES	Women: 20% Men: 26%	Women: 6% Men: 16%	Women: reduce by 24% Men: reduce by 10%

- Note: DHS is sourced for servings of fruits and vegetables only

Key Outcome 2: Improved prevention, control and management of Chronic and NCDs

The baseline data for indicators under this key outcome are from various sources of information so as the progress. It appears that the prevalence and incidence of NCDs being tracked by these indicators are increasing. Admission to public health facilities for the 2 – 3 most common types of cancer varied over the period. There has been a reduction in admissions for injuries in the population aged less than 5 years. Attempted suicide appears to have declined from 2011 to 2017 while the number of suicide deaths is gradually increasing.

Key Outcome 3: Improved prevention, control and management of communicable diseases and infectious diseases

Improvement in surveillance services over the years in the control of communicable and infectious diseases in Samoa has led to rapid elimination of the chikungunya outbreak in 2015 and dengue outbreak in late 2017. There has been one new case of HIV in 2017. There has been an improvement in the incidence of STIs while the prevalence did not progress very well. There is also the need to redefine the baseline measures for notifiable and vaccine preventable diseases. Tuberculosis has seen a significant increase in new cases and some ending in death. The compliance of drinking water supplies with the National Drinking Water Standards has significantly improved.

Key Outcome 4: Improved sexual reproductive health

The indicators specific for sexual reproductive health have shown a lot of improvement since the Health Sector Plan 2008-2018 mid-term review in 2013. The life expectancy for both males and females has increased from 74.2 years in 2011 to 75 years in 2016. Female life expectancy is 79 years and is higher than males who are at 76 years. The increase in fertility rate was not highly significant between 2011 and 2016. Adolescent births showed a decline of 13% from 2009 to 2016. The contraceptive prevalence rate has decreased.

Key Outcome 5: Improved Maternal and Child Health

While the sector performance of most of indicators specific for maternal and children health is progressing, there is a need for further improvements on few indicators. The Maternal Mortality Rate has increased by 10.0% deaths per 100,000 live births from 2011 to 2016. There is an increase in the percentage of births attended by skilled health personnel from 2009 to 2014. Exclusively breastfeeding babies after six months after birth have increased. The antenatal care coverage was high in 2009 at 92.7% and continued to increase to 93.3% in 2014. There has been a decrease in both infant and under-five mortality rates at .4.6% and 0.75% respectively. Recent progress has been made in the area of immunization with 80% of 1 year olds being immunized for MMR1 and 60% for MMR2.

Key Outcome 6: Improved Health Systems, Governance and Administration

As realized during the mid-term review, there is still a lack of comparative data for most of the indicators under this sector key outcome and thus need to modify these indicators or consider changing in the future. Limited information about monitoring the implementation of services standards was encountered. Comparative data to measure indicators on “waiting time” and “clients’ satisfaction” is insufficient; and there is no proper monitoring and evaluation system in place to monitor health services compliance with standards, policies and protocols. The increase in number of healthcare workers in various fields is an outcome of health sector’s untiring effort in addressing the shortages of healthcare workers. The registration and issuance of practicing certificates for health professionals is progressing well and health professional standards that are in place needs to be implemented and monitored.

Key Outcome 7: Improved risk management and response to disasters, emergencies and climate change

The indicators under this key outcome need to be reviewed as the current indicators are not outcome indicators and do not measure the long-term effects of strategies to address response to disasters or climate change. The health sector response to the three natural disasters (2009 tsunami, Cyclone Evan in 2012 and Cyclone Gita in 2017) and two disease outbreaks (Chikungunya outbreak in 2015, dengue outbreak in 2017) that affected Samoa in the life of the Health Sector Plan was reported and acknowledged.

C. Health Sector's Performance Against the Health Sector Plan 2008-2018 Work Program

Strategy 1: Health Promotion and Primordial Prevention

As highlighted above, the Ministry of Health and the health sector had done a lot in this area and these services were taken out to the community in order to achieve the universal health coverage goal of providing the health services needed by the population close to them.

Some of noteworthy achievements under this strategy include:

(i) Development, implementation and monitoring of health promotion and primordial prevention legislations, policies and strategies such as:

HEALTH LEGISLATIONS AND REGULATIONS	HEALTH POLICIES	HEALTH STRATEGIES/STANDARDS
Regulations: Food Regulations 2017 Tobacco Regulations 2013 **Legislations:** Health Promotion Foundation Act 2015 Food Act 2015 Tobacco Control Act 2008	National School Nurse Policy 2018-2023 National NCD Policy 2018-2023 National HIV/AIDS & STI Policy 2017-2022 National Alcohol Control Policy 2016-2021 National Patients Grievance and Complaints Policy 2015-2020 National Food and Nutrition Policy 2013-2018 National Health Prevention Policy 2013-2018 National Health Promotion Policy 2013-2018 National NCD Policy 2010-2015 National Tobacco Control Policy 2010-2015	National School Nutrition Standards Healthy Workplace Guidelines Samoa Health Guideline for Tattooing Health Promoting Schools Guideline Traditional Birth Attendants Guideline

(ii) Multimedia campaign

The Ministry of Health in collaboration with sector partners continues to conduct multimedia campaign to promote healthy living in Samoa, and inform the public of prevention methods to prevent them from disease outbreaks, NCD risk factors and effects of natural disasters and/or climate change.

(iii) Building supportive environment through multi-sectoral approach that facilitate healthy lifestyles such as building footpaths, sea wall, sports grounds and children's parks in Apia.

(iv) Community Engagement

The community engagement to health programs has been improves as most of world and national health events are conducted in the community such as Physical Activity Expo during National Health Weeks every November, and commemoration of World Health Days.

(v) Political Support

There were two high level advocacy groups established to advocate health at the political level. These include the Women in Leadership Advocating Health (WinLAH) and Samoa Parliamentary Advocacy Group for Healthy Living (SPAGHL). The WinLAH contributed a lot in boosting advocacy programs for Sexual Reproductive Health and STI while the SPAGHL concentrated on monitoring the supportive environment in schools.

Strategy 2: Quality Healthcare Service Delivery

(i) Public Health Services

The monitoring and surveillance of communicable and neglected tropical diseases has become more systematized. This was reflected during the health sector's response to H1N1 pandemic and Tsunami in 2009, Cyclone Evans in 2012, Ebola and Chikungunya in 2015.

The Communicable Disease Committee conducted their meetings on monthly basis to provide update on suspected outbreaks and the trends of communicable and neglected tropical diseases in Samoa.

The concern from the mid-term review about the facilities for communicable diseases with testing and treatment for STIs, HIV, TB and leprosy providing at one area at TTM Hospital was taken into consideration and these diseases have separate rooms for treatment.

(ii) Maternal and Child Health Services

As also noted in the mid-term review, health services provided for maternal and child health has been improved. The antenatal clinics are continually conducted in all health facilities. There is an increase in numbers of midwives being graduated and from the National University of Samoa and being distributed to health facilities including district hospitals.

The coverage of the Expanded Program of Immunization has been intensely increased since the nursing workforce has been significantly increased.

Regardless of improvements in health services provided for mothers and children, there are other areas that need to be strengthened. These include breastfeeding and effective implementation of Baby Friendly Initiative in hospitals.

(iii) Sexual Reproductive Health Services

The Sexual Reproductive Health and Adolescent Health Section under the Ministry of Health oversees and monitors the implementation of the National Sexual Reproductive Health Policy 2012-2017 by stakeholders. The update of this policy is now under development aiming at enhancing sexual reproductive health services provided for those who need the service.

The National Sexual Reproductive Health Stakeholders' Meetings are conducted on monthly basis to discuss the progress of services provided, and identify gaps that need improvements.

(iv) Primary Health Care

The establishment of the Samoa Primary Health Care Centre under the National Health Service was the government of Samoa's initiative to revitalize Primary Health Care Services provision in Samoa.

The Ministry of Health and the health sector had for the past decades invested much into building stronger and more resilient health systems and will continue to work on transforming the current fragmented public health system to provide high quality services.

The expansion of the National Kidney Foundation of Samoa and Samoa Family Health Association services to Savai'i were some of the significant milestones by the sector in trying to ensure what is good for the health of the people residing in Upolu are also good for people residing in Savai'i.

Strategy 3: Governance, Human Resource for Health and Health Information Systems

(i) Governance

A lot of new health legislations, policies, strategies and services standards had been developed since 2008 as highlighted above. These are to guide the work of the Ministry of Health as the leading agency for Samoa's health sector and its partners/stakeholders.

Refurbishment had been undertaken for five district hospitals (Lalomanu, Poutasi, Sataua, Safotu and Foailalo) with the building of the new health centres at Faleolo and Avao. The rebuilding of the TTM Hospital and renovation of MTII hospital were also noted.

The building of the new Orthotics and Prosthetics Workshop aims to provide higher standards of care for amputees, disabilities and people with deformities.

Building of the Pharmaceutical Warehouse in 2016 in 2016 contributed greatly to saving lives of Samoan people as this was designed and built to keep vaccine and medicines installed at the right temperature, so that they could maintain a lifesaving dependency.

(ii) Human Resources for Health

The healthcare workforce of Samoa's health sector has been gradually increased from time to time since 2008.

Even though there is increase in numbers of healthcare workforce every financial year since 2008, the apparent insufficient supplies of health workers in Samoa's health system remains one of the major challenges faced by the health sector given the fact that the current workforce cannot meet the health demands of the population. This will be taken into account with the development of the new Human Resources for Health Policy and Plan of Action that are in pipeline.

(iii) Health Information Systems

Health information remains one of the major challenges faced by the health sector since the beginning of the current sector plan's implementation in 2008. Providing accurate data and information to provide baseline data and progress for the current sector plan's outcome and indicators was very challenging as the information systems used at that time i.e. Patient Information System (PaTIS) and Community Health Nurse Information System (CHNIS) did not function properly.

Because of this long overdue difficulty in the sector, the e-health project was proposed and approved by the government to be funded under the Asian Development Bank with the aim to enhance Samoa's health sector information system. This project is in its planning stage, and it is expected to be fully realized in the next sector plan of the health sector.

Strategy 4: Partnership Commitment

The Ministry of Health and the health sector valued the importance of collaboration of all public and private health partners in achieving the objectives of the Health Sector Plan 2008-2018. This partnership was strengthened and enhanced through monthly public health sector management meetings, annual health sector forums and reviews, Health Programs Advisory Committee (HPAC) meetings and bilateral health summits with American Samoa.

Strategy 5: Financing Health

The limitation in availability of resources to a Pacific Island country like Samoa has prompted the Ministry of Finance to redirect its focus from an output-based budgeting mechanism to a more outcome focused one for all the government ministries including corporations. This is to ensure that finances are managed effectively in achieving outcomes that contribute to strategic issues which impact on the overall welfare of the general population.

The role of the Ministry of Health since 2006 as a newly established entity has since changed from that of an implementer of services to a regulating authority not just for the public health services but that of the whole health sector inclusive of the private health sector. With this new role in place mandated under the Ministry of Health Act 2006, having the right mechanism and tool in place to further articulate and to fully realize the Ministry's role and mandate has been a challenge financially and strategically. Capacities are forever tested as we try to keep up with the changes in the global economy.

The production of National Health Accounts now on yearly basis contributes to identification of priority areas of health to be prioritized in funding allocations.

Strategy 6: Donor Assistance

The birth of the Sector Wide Approach Program was and had been Samoa's answer to its health sector in facilitating donor assistance in a more harmonious way. This approach is ongoing and the government of Samoa in collaboration with the World Bank, NZ MFAT and Australian DFAT are the main development partners.

D. Health Sector's Performance Against the Six Components of the Health System

The performance of the health sector against the six components of the health system are reflected on their performance against the Work Program of the Health Sector Plan 2008-2018 since the key strategies of the plan were based on these six components.

The full review of the Health Sector Plan 2008-2018 found that having the Health Sector Monitoring and Evaluation Operational Manual in place really helped with tracking the performance of the sector against its set key outcomes. However, there are some indicators that need to be removed with some needing refinement.

Although the health sector's performance against its seven key outcomes is progressive, there are areas that need to be prioritized and addressed in the next health sector plan. These include:

(i) Sustaining healthy lifestyles and strengthened services focusing on social determinants of health;
(ii) Strengthen governance functions of all sector partners through private and public partnership within the health sector;
(iii) Enhancement of prevention, control and management of Non-Communicable Diseases as well as infectious and or neglected tropical diseases;
(iv) Strengthen and enhance maternal health services;

(v) Strengthen and enhance reporting obligations of the health sector to the Ministry of Health for health sector's performance assessment;
(vi) Strengthen surveillance and public health services to assess health impacts of climate change and disasters;
(vii) Immediate implementation of the e-health project; and
(viii) Alignment and linkage of national health indicators to regional and global health indicators and SDGs.

1.0 INTRODUCTION

The Health Sector Plan 2008-2018 Full Review Report is a collective process encouraging knowledge production to strengthen the capacity to provide health services to the country in an efficient manner.

This Analysis sets out the health sector's financial and non-financial performance for the period of the current Health Sector Plan 2008-2018 and analyzes the sector's progress towards achieving its vision for "A Healthy Samoa" by 2018.

The main focus of this analysis is to provide the progress on the health sector's performance against the following indicators and outcomes during the life span of the Health Sector Plan2008-2018:

a) National health indicators as identified in the national strategy of Samoa (SDS FY2016/17-FY2019/20);
b) Health Sector 7 Key Outcomes identified in Health Sector Monitoring and Evaluation Operational Manual 2011 which is aligned with the redefined health sector priorities identified from the Health Sector Plan 2008-2018 Mid-Term Review Report 2013; and
c) Key Components of Samoa's Health System

This document helps to understand Samoa's health status and its determinants as well as the performance of its health system. It also orients the identification and selection of priority areas that needs to be reflected in the new Health Sector Plan for the next ten years (FY2019/20 – FY2029/30).

1.1 Methodology

The collection of data and information for the full review of the Health Sector Plan 2008-2018 was through various means such as literature review and interviews with individuals and groups. The different ways used to collect data was to ensure that we do justice to the work implemented over the last 10 years.

Literature Review:
Literature review involved reviewing reports, documents, monitoring and evaluation reports, reviews, statistical bulletins, surveys, forum proceedings, project reports and analysis from existing and available documents prepared and produced by the health sector partners on programs and activities implemented by the sector during the life of the Health Sector Plan 2008-2018. These documents are recorded in the Reference section of the report.

Interviews:
Face-to-face interviews and discussions with stakeholders and partners stakeholders were conducted with some in groups to provide updates on the progress of their work over the years. Interviews sessions were also used to confirm data already received and enlightenment on work in progress. Opportunities were also available for partners and stakeholders to present their views on the achievements and challenges of the HSP over the years.

1.2 Limitations

Information collection
The review also had its limitations. The information provided in the review is the information collected from reports and documentation as identified in the Literature Review. Quantitative data analysis was a

time consuming exercise. Not all available data could be compared as baselines were not the same. Some data required calculating averages in order to have meaningful information. Information was scattered, and so was the reporting.

The scattered health information system was of no help as data was stored in different locations. This also meant some data were stand alone and could not be compared. The reports from previous years were a good source of information but maintaining the same data values was hard.

Information Sharing
Regardless of refusal and lack of understanding the team believes there is still the need to foster the concept of genuine partnerships in the health sector especially in the sharing of information that will improve strategic policy and planning purposes. Such information will assist in the improvement of the health of the people of Samoa.

Monitoring and Evaluation
Similarly, indicators were also scattered. Reporting was also done in many different ways. Data reporting was on specific requirements and what the relevant projects required. There was no central system to store and maintain health indicators. Monitoring and evaluation were done in parallel. Data collection, analysis and management were done separately. Maintaining a centralized data system is long overdue.

Data Quality and Discrepancies
As noted above data is sourced from different sources, and as also noted, data is specifically analyzed tailored to the requirements. Hence when collated, there will be differences in figures. Qualitative data is not much of a problem unlike quantitative data. The quality of the data then becomes questionable. Unpublished research data may be useful and provides responses to indicators but needs to be validated before it can be credible to be quoted.

1.3 Background Information

The Health Sector Plan (HSP) 2008-2018[1] was officially launched on 31st January 2008 and is scheduled to terminate in December 2018. This Health Sector Plan is the plan for Samoa's health sector and this is the third sector plan for the health sector since public sector reforms started in 1998. The vision for this Health Sector Plan (2008-2018) i.e. "**A Healthy Samoa"** derived from the visions of the national strategies of Samoa at that time (SDS 2008-2012 & SDS2012-2016) aiming at achieving a "***Better Quality of Life for All".***

Moreover, this Health Sector Plan (2008-2018) was formulated in response to the Health Sector Situational Analysis[2] and other government documents and reports. The Samoa Health Sector Situational Analysis 2006 reiterated that Samoa's health sector had faced challenges in the delivery and continued development of health care as well as health promotion services. The analysis identified the necessity to consider changes in population structure, economic status and settlement patterns through the distribution, modality and configuration of health services. The four main health challenges identified from this Analysis include:

(i) Rapidly increasing levels of Non-Communicable Diseases;
(ii) Importance of reproductive, maternal and child health;
(iii) Emerging and re-emerging of infectious diseases and
(iv) Injury as a significant cause of death disability.[3]

[1]Ministry of Health, 2008, *Health Sector Plan 2008-2018*
[2]Samoa Ministry of Health & JTA International, 2006, *Samoa Health Sector Situational Analysis.* Apia
[3]Samoa Ministry of Health & JTA International, 2006, *Samoa Health Sector Situational Analysis.* Apia

To address these challenges, the Health Sector Plan 2008-2018 work program was categorized under six (6) Key Strategic Areas with their objectives to explain what the sector aims to achieve as well as their outputs to be implemented in order to achieve the identified objectives. These are detailed in the table below.

Table 1: Six Key Strategic Areas of the Health Sector Plan 2008-2018

KEY STRATEGIC AREAS	OBJECTIVES	OUTPUTS
1. Health Promotion and Primordial Prevention	To strengthen health promotion and primordial prevention.	1.1 Strengthen and build healthy public policies 1.2 Improve environmental health 1.3 Strengthen community action 1.4 Build up personal life skills and healthy choices for individuals 1.5 Continue strengthening reorientation of health services.
2. Quality healthcare service delivery	To improve access to and strengthen quality healthcare delivery in Samoa.	2.1 Control and manage selected communicable (infectious) and non-communicable diseases 2.2 Improved reproductive, maternal and child health 2.3 Improved healthcare physical infrastructure and equipment 2.4 Implementation of professional and services standards 2.5 Skilled and competent health professionals and support staff. 2.6 Accessibility and affordability of healthcare services and supplies. 2.7 Strengthened community integrated healthcare. 2.8 Essential clinical and diagnostic support health services 2.9 Establish consumer complaints and community engagement for healthcare services.
3. Governance, Human Resources for Health and Health Systems	To strengthen regulatory, governance, human resources for health and leadership role of the Ministry of Health.	3.1 Strengthened strategic linkages with other sectors and sector partners. 3.2 Increased accountability and transparency at all levels 3.3 Increased availability of appropriately qualified and skilled health workforce 3.4 Effective statutory bodies 3.5 Evidence based policies, monitoring and regulatory frameworks 3.6 Legislative framework in place 3.7 Strengthened national educational institutions as a foundation of "self-help" for health 3.8 Health systems strengthened in Samoa and linked to regional and international initiatives.
4. Partnership Commitment	To strengthen health systems through processes between the Ministry of Health and health sector partners.	4.1 Develop appropriate performance measurement indicators and contractual arrangements. 4.2 Promote and develop sectoral policies enhancing health impacts and opportunities. 4.3 Strengthen communication linkages and

KEY STRATEGIC AREAS	OBJECTIVES	OUTPUTS
		collaboration between all health service providers. 4.4 Equitable and quality healthcare service delivery.
5. Financing Health	To improve health sector financial management and long term planning of health financing.	5.1 Improve equitable allocation of resources. 5.2 Strengthen the financial management systems including procurement. 5.3 Long term financial health plan 5.4 Develop appropriate financial sector policies.
6. Donor Assistance	To ensure greater development of partner participation in the health sector.	6.1 Increasing country led donor participation in health. 6.2 Strengthens strategic linkages with donor funded regional and international programs.

These strategic areas above were reviewed during the Health Sector Plan 2008-2018 mid-term review. The outcome of the review recommended that the health sector adopt the seven (7) Key Outcomes of the Health Sector Monitoring and Evaluation Operational Manual 2011 as the amended Key Outcomes of the HSP. These key outcomes are aligned with the priorities and targets of the health sector. These key outcomes are used to measure the performance of the sector for the remaining life of the Health Sector Plan (2008-2018).

These seven key outcomes include:

(i) Improved Healthy Living through Health Promotion & Primordial Prevention
(ii) Improved Prevention, Control and Management of Chronic and NCDs
(iii) Improved Prevention, Control and Management of Communicable Diseases and Infectious Diseases
(iv) Improved Sexual Reproductive Health
(v) Improved Maternal/ Child Health
(vi) Improved Health Systems, Governance and Administration
(vii) Improved Risk Management and Response to Disasters, Emergencies and Climate Change.

This full review of the Health Sector Plan 2008-2018 uses the endorsed seven (7) key outcomes to measure against these key outcome and indicators and will determine lessons learnt from the implementation of the Health Sector Plan 2008-2018 during its 10 years of implementation. At the same time, it will provide recommendations and priority areas that the health sector needs to consider in the development of the next health sector plan.

1.4 Overview of Health Status in Samoa

1.1.1 Population:

The 2016 Population Census preliminary results show the annual population growth of Samoa by 0.85% since the 2011 Population Census[4]. In contrast, the population of Samoa showed a rapid increase within the periods of 2011-2016 than the 2001-2006 and 2006-2011.

[4]Samoa Bureau of Statistics. 2017. *Samoa Population Census Report2016 Preliminary Results (1st version).* Apia

Table 2: Population Growth of Samoa

CENSUS YEAR	TOTAL POPULATION	PERIOD	ANNUAL GROWTH RATE (%)
2001	176,710	1991-2001	-
2006	180,741	2001-2006	0.5
2011	187,820	2006-2011	0.63
2016	195,843	2011-2016	0.85

Source: Samoa Population Census Reports 2001,2006,2011,2016 (Samoa Bureau of Statistics)

The increase in population growth as illustrated in Table 2 above impacts on many aspects of Samoa's health system performance such as the provision of quality health care, financing, human resources, health promotion, health protection and health information.

1.1.2 Health Status:

Table 3: Data from 2016 Population Census Preliminary Results

HEALTH INDICATOR	FIGURE AT 2011 CENSUS	FIGURE AT 2016 CENSUS
Population Census	187,820	195,843
Annual Population Growth	0.63%	0.85%`
Crude Birth Rate	31.6 births/1000 live births	21.4 births/1000 live births
Crude Death Rate	5.19 deaths/1000 livebirths	5 deaths/1000 live births
Life Expectancy (both sexes)	74 years	75 years
Life Expectancy – Male	73 years	72 years
Life Expectancy – Female	76 years	79 years
Total Fertility Rate	4.7 children per woman	3.9 children per woman
Infant Mortality Rate	16 deaths/100 0 live births	18.6deaths/1000 live births
Under five mortality rate	20 deaths/1000 live births	19.25 deaths/1000 persons
Maternal Mortality Rate	40.2 per 100,000 live births	51 per 100,000 live births

Source: Samoa Population Census Report 2011 & Preliminary Results 2016 (Samoa Bureau of Statistics)

As shown in the Table 3 above, fertility rates dropped from 4.7 children per woman in 2011 to 3.9 children per woman in 2016. This trend indicates that although there are a lot of factors contributing to the decrease in fertility rate (i.e. smoking, alcohol, sexually transmitted diseases), it is more of an indication towards increased educational levels of the general population, greater female participation in the workforce; and increased access to knowledge of and availability of family planning methods.

It is also noted in Table 3 that the female average life expectancy of 79 years is higher than that of males at 76 years. This verifies females naturally have longer lifespans than males, worldwide. This trend is also related to more males consuming alcohol (18.8% of current drinkers are men and 2.2% are women) and tobacco (36.5% of male smoke versus 13.7% of women) as evident in the Non-Communicable Disease Risk Factors STEPS Report 2014[5] .

[5]Ministry of Health, et al. 2014.*Samoa NCD Risk Factors STEPS Report 2014*. Apia

2.0 HEALTH SECTOR PERFORMANCE AND PROGRESS

2.1 Sector Performance against National Health Indicators:

The specific national development goal for health under the Strategy for the Development of Samoa for the Financial Year 2016/17 – Financial Year 2019/20 is reflected under its Key Outcome 6 i.e. **A Healthy Samoa and Well-being promoted"**.[6] Under Key Outcome 6 are strategic outcomes and indicators that the health sector has to implement as their contribution to the achievement of the national vision which is: ***"Accelerating Sustainable Development and Broadening Opportunities for All".*** These indicators are as follow:

Table 4: Strategy for the Development of Samoa FY2016/17-FY2019/20 Key Outcome 6 Strategic Outcomes and Indicators.

Key Outcome 6: A Health Samoa and Well-being Promoted	
STRATEGIC OUTCOMES	**INDICATORS**
1. Health Promotion, Protection and compliance improved.	1.1 Prevalence of alcohol drinkers reduced by 5% 1.2 Prevalence of smokers reduced by 5% 1.3 Number of physically active people increased by 5%.
2. Primary Health Care Improved.	2.1 Infant mortality rate reduced. 2.2 Mortality ratio reduced. 2.3 Population screened for early Non-Communicable Diseases detection and diagnosed increased.
3. Safety/Quality of Healthcare Service.	3.1 Number of health professionals is increased. 3.2 Patient sent for overseas treatment reduced by 5% 3.3 Waiting time in emergency department general outpatient, triaging reduced. 3.4 100% compliance of healthcare workers with professional standards. 3.5 Health information system implemented. 3.6 Access to health products and services increased.
4. Management and response to disasters, and emergencies and climate change improved.	4.1 100% compliance with disaster and climate resilience plans.

Source: Strategy for the Development of Samoa for FY2016/17 – FY2019/20.

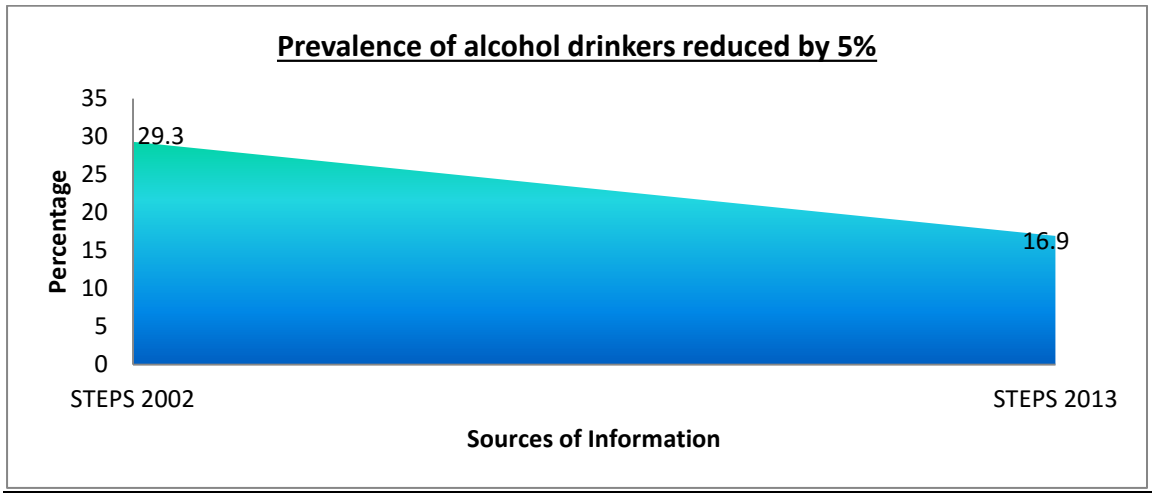
The health sector's performance against the aforementioned strategic outcomes and indicators are reported below:

Table 5: SDS Key Outcome 6: Strategic Outcome 1

Strategic Outcome 1:	**Health promotion, protection and compliance improved.**			
Indicators	**Baseline**	**Target (Health Sector Plan)**	**Progress**	**Status**
Prevalence of alcohol drinkers reduced by 5%	29.3% (STEP Survey 2002)	26.5%	16.9% (STEP Survey 2013)	**Achieved**
Prevalence of smokers reduced by 5%	40.4% (STEP Survey 2002)	20.15%	27.1% (STEP Survey 2013)	**Achieved**
Number of physically active people increased by 5%	49.8 % (STEP Survey 2002)	95%	61.1% (STEP Survey 2013)	**Achieved**

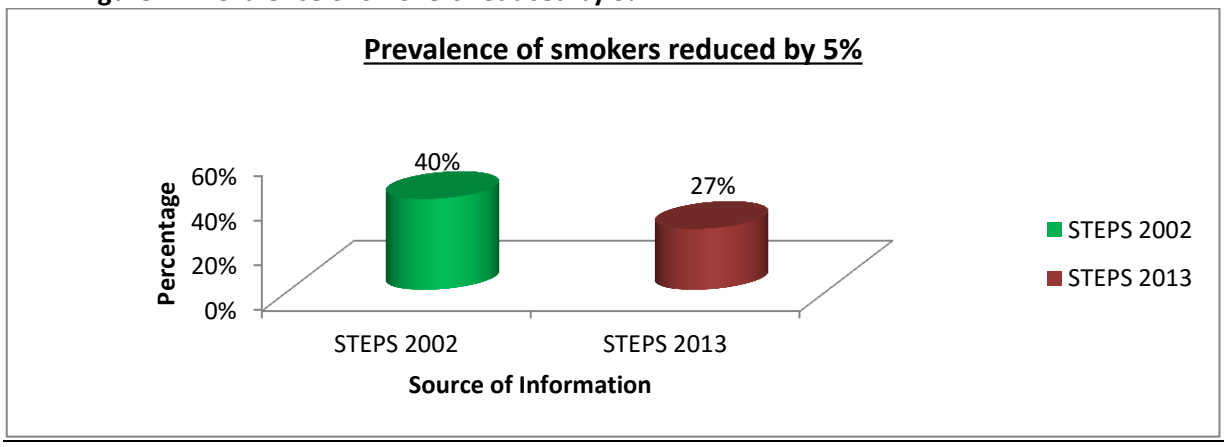
[6] Ministry of Finance. 2017. *Strategy for the Development of Samoa FY2016/17-FY2019/20.* Apia

Figure 1: Prevalence of alcohol drinkers reduced by 5%:



The prevalence of alcohol drinkers has decreased by 12.4%. This means the number of people consuming alcohol has decreased when compared to the results of the STEP Survey 2002 and 2013 which showed the percentage of alcohol drinkers at 29.3% and 16.9% respectively. This highlights the implementation of effective interventions and monitoring tools to control alcohol consumption in Samoa. This also includes the successful implementation of health promotion and educational programs via multi-media campaigns, implementation of health policies, strategies and legislations. Similarly, the representation of the health sector as a member of the Liquor Board provides an avenue to encourage the control of alcohol consumption. The health sector continues to work to implement the Action Plan of the newly approved National Alcohol Control Policy 2016-2021 to discourage binge drinking and minimize alcohol consumption.

Figure 2: Prevalence of smokers reduced by 5%:



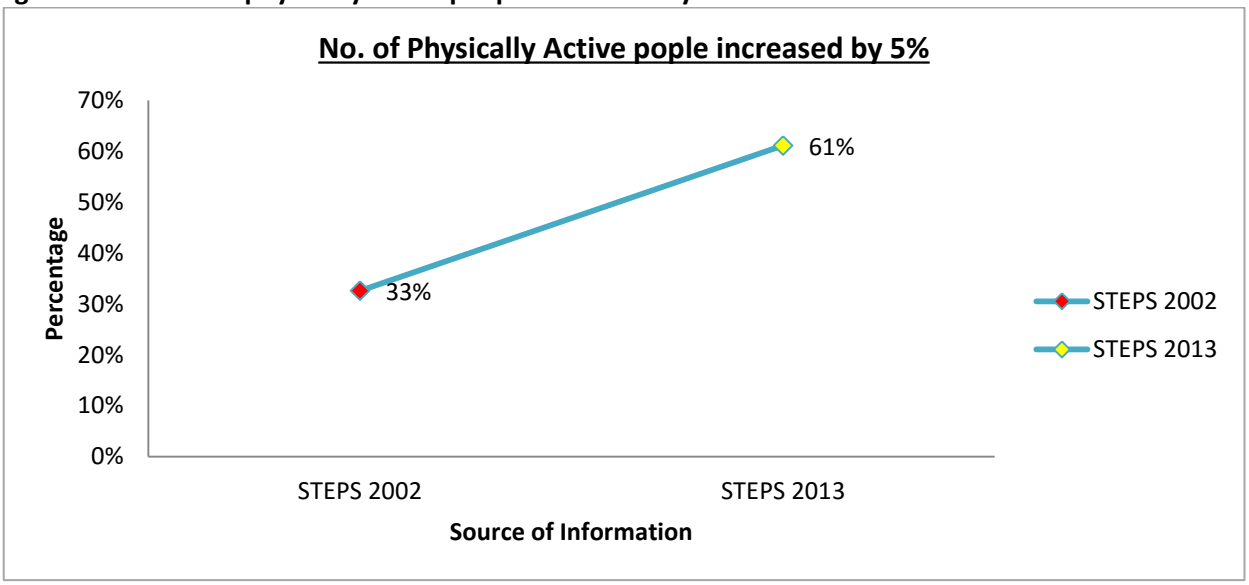
The prevalence of smokers has been significantly reduced by 13.3%. Activities to assist in controlling smoking saw the passing of the Tobacco Control Act 2008 and Tobacco Control Regulations 2013, as well as the implementation of the National Control Policy 2008.

The posing of the 5% increase in excise tax on tobacco products in June 2016 by the government is another achievement that contributes to reducing the accessibility of tobacco products by the younger population. The Global Youth Tobacco Survey (GYTS) 2007 which targets the ages of 13-15 found that 16.6% of students smoked cigarettes. The GYTS 2017 released a drop to 10.5%[i] of students who currently smoked cigarettes.

To further strengthened control programs for tobacco control, the government has launched a nationwide effort to help Samoa become the leading country in protecting people from the harms of tobacco. The official launching of the Samoa Framework Convention on Tobacco Control (F.C.T.C) 2030 project in January 2018 follows the decision to choose Samoa as one of the countries to receive dedicated international support from the United Nations to take action on smoking as a member state of the F.C.TC. This project will support Samoa to accelerate the WHO F.C.T.C with the focus on protecting children from harmful use and effects of smoking. The Government of Samoa has recently ratified the 'Protocol to Eliminate the Illicit Trade in Tobacco Products."

The m-Cessation project was a partnership between the Government of Samoa through the Ministry of Health and the University of Auckland to assist Samoa in its efforts control smoking tobacco. With limited tobacco cessation programs in Samoa, the study was a welcome initiative as it aligned with the Tobacco Control Program Plan of Action on upscaling interventions to reduce the prevalence of tobacco smoking. The project offered a mobile phone based programme implemented in Samoa and other neighboring countries[ii]focusing text messaging support system to promote smoking cessation in Samoa; a mass media campaign through television and radio; and testing of the m-Cessation program among 100 smokers. One of the indicators of the project as tested showed that 31.4% of the people have friends and families who smoke adding to the difficulty to quit smoking.

Figure 3: Number of physically active people increased by 5%:



The number of physical active people in Samoa has increased by 28.5% (from 32.6% in 2002[7] to 61.1% in 2013)[8]. This indicates that the population is more conscious of their health and the increase in numbers of physical activity programs now available to the community encouraging the public to participate. These include the increasing number of gymnasiums now operating in Samoa, the ongoing Ministry of Health's Physical Activity program for the mainline churches annual conferences, during the celebration of annual health events; Zumba programs by physical activity groups like Fana & Lee Zumba; Culture X; Temple Fitness; NUS and the TV 1 Annual Fika Fou challenge; One Touch Ministry's 10 weeks Boot Camp and NOBESITY Samoa Program targeting obese and overweight children; and the fitness and nutrition expo led by the Ministry of Health during the National Health Week in November 2017.

The Physical Activity Program community competition through aerobics in 2012 was the climax of the physical activity program which has led to the continuous commitment of communities and individuals to

[77]WHO. 2002. *NCD Risk Factor Stepwise Survey 2002*. Apia
[8]Ministry of Health & WHO. 2013. *NCD Risk Factor Stepwise Survey 2013.* Apia

take ownership in their own health and is reflected in the growth of the business communities initiating and providing health programs for the public such as Zumba and recreational programs in villages and gyms.

Sports was promoted as a career in the past but has changed focus and thrive to incorporate health as articulated in the Global Physical Activity Tool Kit Consultation conducted by the World Health Organization in 2015. One of the outcomes of this process was the involvement of the sporting bodies in the National Physical Activity Program leading to the establishment of the National Physical Activity Committee in 2016. The Committee consists of all Sporting Bodies, recreational programs, relevant government Ministries and Corporations and the National Council of Churches as a sub-committee under the National NCD Committee which is chaired by the Ministry of Health. The Physical Activity and Nutrition Expo with the theme of 'Accelerating Physical Activity and Nutrition through Sports and other Recreational Programs' was the first initiative of the Committee held in 2017 during the National Health Awareness Week. This program will be an ongoing program to upscale physical activity interventions.

Table 6: SDS Key Outcome 6: Strategic Outcome 2

Strategic Outcome 2:	**Primary Health Care improved.**			
Indicators	**Baseline**	**Target**	**Progress**	**Status**
Infant Mortality rate reduced.	15.6 deaths per 1000 live births (Census 2011)	10 (50% decrease)	18.6 deaths per 1000 live births (Census 2016)	**Not Achieved**
Maternal Mortality Ratio decreased	40.2 per 100,000 live births (Census 2011)	23/100,000	51 per 100,000 live births (Census 2016)	**Not Achieved**
Population screened for early Non Communicable Diseases detection and diagnosed increased	23,302 people screened from 138 villages (Village Health Fair 2010)	Not defined	1,568 people screened in 2 villages (PEN Faa-Samoa 2015) 1,126 people screened in 5 villages (PEN Faa-Samoa 2016) 1,033 people screened in 7 villages (PEN Faa-Samoa 2017)	**Achieved**

The health sector was able to achieve 1 out of 3 (33%) indicators under Strategic Outcome 2 of the SDS FY2016/17-2019/20 Key Outcome 6. The achieved indicator is the population screened for NCDS. The 2 (67%) indicators not achieved are infant mortality with an increase of 3.0 deaths per 1,000 live births, and maternal mortality noting a significant increase of 10.8 deaths per 100,000 live births. Detailed information on implementation is reported below.

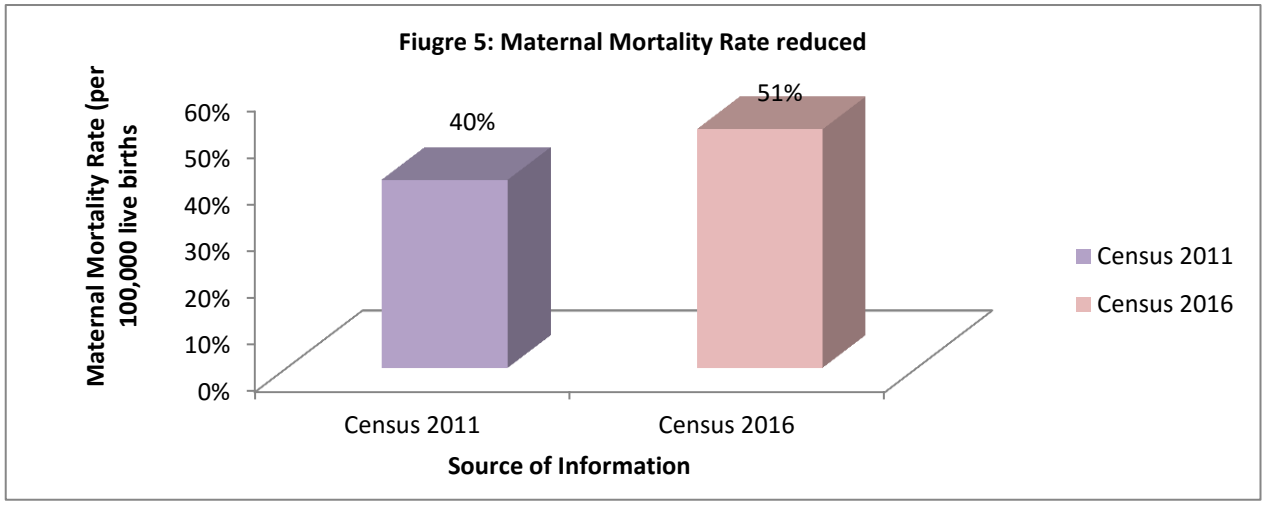
Infant Mortality Rate reduced:

There was an increase on infant mortality rate of 3.0 deaths per 1,000 live births for Samoa.

Indicators	**Baseline**	**Target**	**Progress**	**Status**
Infant Mortality rate reduced.	15.6 deaths per 1000 live births (Census 2011)	10 (50% decrease)	18.6 deaths per 1000 live births (Census 2016)	**Not Achieved**

Maternal Mortality Rate:

The increase in maternal mortality rate of Samoa is very significant. As reported in previous annual health sector reviews, the trend of maternal deaths in Samoa has varied from time to time. The Population Census 2016 indicated an increase of 10.8 deaths per 100,000 live births and this is a significant increase.



With the mortality rate increasing, the health sector should revisit the interventions and develop new strategies and programs to strengthen maternal health services in Samoa.

The Ministry of Health through the HSPQA Nursing and Midwifery Division conducted a Midwifery Credentialing program in 2016 and 2017 to update, support and assist midwives with their work. A TBA Guideline was finalized and launched in 2018.

Population screened for early Non Communicable Diseases detection and diagnosed.

Indicators	Baseline	Target	Progress	Status
Population screened for early Non Communicable Diseases detection and diagnosed increased	23,302 people screened from 138 villages (Village Health Fair 2010)	Not defined	1,568 people screened in 2 villages (PEN Faa-Samoa 2015) 1,126 people screened in 5 villages (PEN Faa-Samoa 2016) 1,033 people screened in 7 villages (PEN Faa-Samoa 2017)	**Achieved**

Non-Communicable Diseases was identified by the health sector as a major challenge during the Health Sector Plan 2008-2018 mid-term review in 2013. The Whole of Country, Whole of Government, One Health concept was promoted under the direction of the Samoa Parliamentary Advocacy Group for Healthy Living focusing on improving the health consciousness and ascertains the health status of the people of Samoa through an integrated, collaborative and participatory health promotion approach. The program was divided into two parts. The first part focused on NCD screening utilizing the concept of village health fairs. As a result, 23,302 people from 138 villages were screened for NCDs. The second part focused on the WHO PEN concept adopted by the Ministry of Health with technical and financial assistance from the WHO to contextualize the WHO Package of Essential NCD Interventions to suit Samoa's context. The birth of the PEN Fa'a-Samoa Program, with the aim of providing NCD screening programs to the community. These include taking blood pressure and measuring Body Mass Index (BMI)

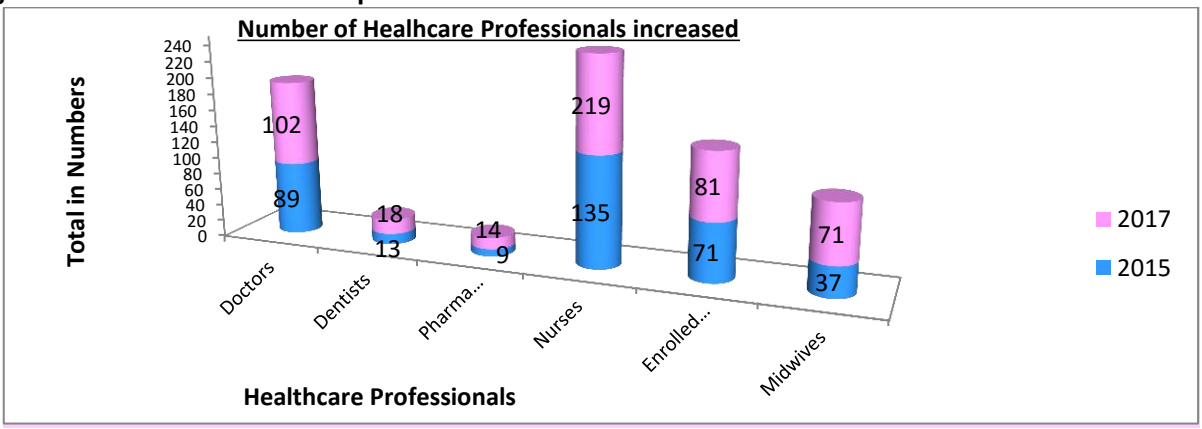
and ways to detect those who are affected by NCD for early diagnosis and treatment. The program started with 2 villages with in 2012 and screened 1,568 people. The additional 1,126 people were screened from 5 villages in 2015 and 1,033 people in 2017 from 5 villages.

Table 7: SDS Key Outcome 6: Strategic Outcome 3

Strategic Outcome 3:	Safe / Quality of Health Care Services			
Indicators	**Baseline**	**Target**	**Progress**	**Status**
Number of health professionals increased:	Doctors = 89 Dentists = 13 Pharmacists = 9 Nurses = 135 E/Nurses =71 Midwives = 37 (MOH 2015)	Not defined	Doctors = 102 Dentists =18 Pharmacists =14 Nurses = 219 E/Nurses =81 Midwives = 71 (MOH 2017)	**Achieved**
Patient sent overseas for treatment reduced by 5%	307 patients (NHS OVT Report FY2014-15)	Not defined	167 patients (NHS OVT Report FY2015-16)	**Achieved**
Waiting time in emergency department, general outpatient, triaging reduced.	<1 hour = 15% 1-2 hours = 25% > 2 hours = 57% **(MOH QA Report 2012)**	Not defined	<1 hour = 5.6% 1-2 hours = 32.4% >2 hours = 61.9% **(MOH QA Report 2017)**	**Not Achieved**
100% compliance of healthcare workers with professional standards.	Average for all healthcare professionals = 89% **(MOH 2016)**	Not defined	Average for all healthcare professionals = 93% **(MOH 2017)**	**Achieved**
Health information system implemented.	PatIS Information System (2009)	Not defined	E-Health project is its planning phase and yet to be implemented.	**Progressive**
Access to health products and services increased.	n/a	Not defined	-	

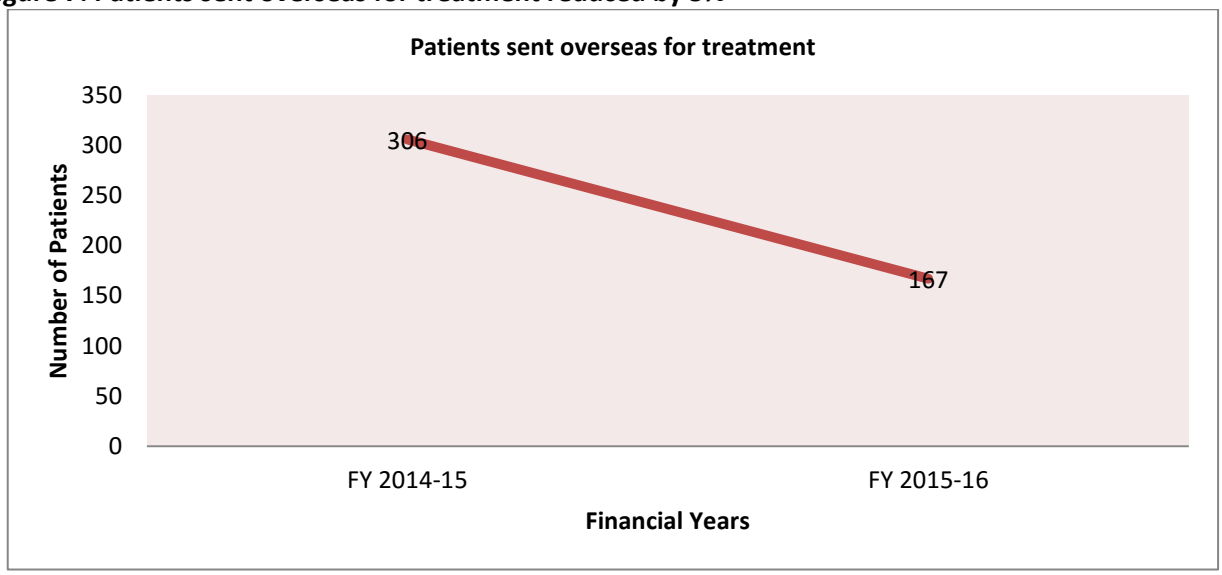
The health sector was able to achieve 2 out of 5 (40%) indicators under Strategic Outcome 3 of the SDS FY2016/17-2019/20 Key Outcome 6, and 3 out of 5 (60%) indicators were not achieved. Indicators not achieved include waiting time in emergency, general outpatient and triaging; compliance of health care workers with professional standards, health information system and access to health products and services. Implementation of these indicators is detailed below:

Figure 6: Number of healthcare professionals increased



Number of healthcare professionals increased:
Figure 6 shows an increase in the number of healthcare professionals providing healthcare services for Samoa's population. The healthcare profession that dominates the healthcare workforce with a very significant increase in numbers is the nursing profession. This indicates the effective marketing strategy by the profession in promoting nursing career. In addition, all students enrolled under the nursing program at the National University of Samoa are fully funded by the Government of Samoa. It will be interesting to see the trend in the new sector plan with changes made to nursing scholarships to ensure that scholarship opportunities are fairly distributed among the different health professions.

Figure 7: Patients sent overseas for treatment reduced by 5%



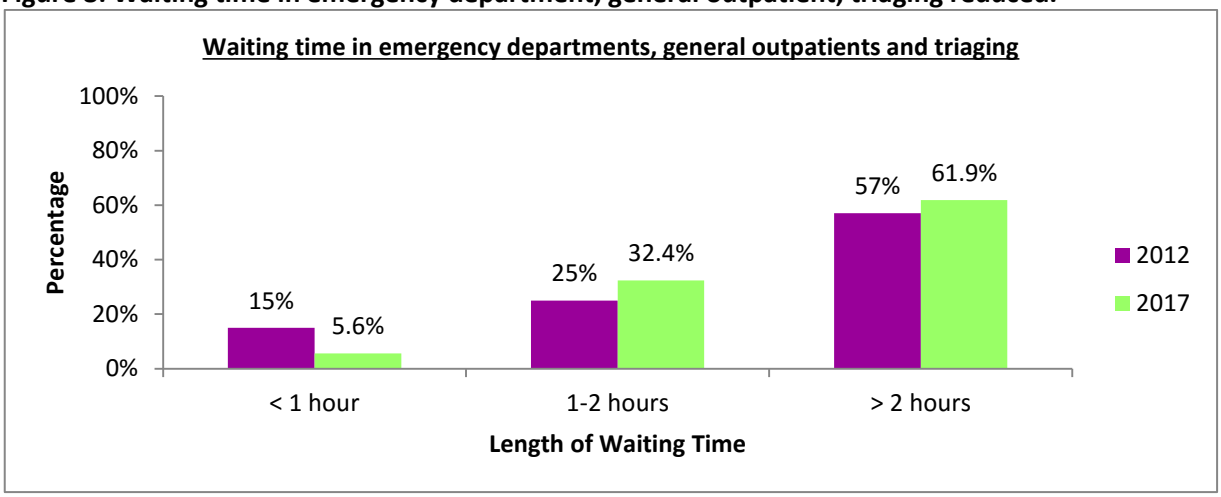
Sending patients overseas under the Samoa Medical Treatment Scheme (SMTS) for treatment that are not available in country is one of the major challenges faced by the health sector and the government as expenditure on sending patients overseas for treatment is expensive. According to the National Health Account Report for the Financial Year 2014-15, 10.5% of current health expenditure was spent on overseas treatment[9]. The majority of cases being referred for overseas medical treatment were those with cardiac and oncology conditions.

The number of patients sent for overseas for medical treatment has reduced by 45.6% from 307 in FY2014-15 to 167 in FY2015-16[10]. This is due to the increase in numbers of overseas medical teams visiting the country and conducting medical surgeries for patients in country. The Ministry of Health as the leading agency for Samoa's health sector is currently working on reviewing the current Overseas Medical Treatment Policy 2009 and will consider alternatives to manage and control overseas treatment. The challenge is that the majority of referrals have poor prognosis.

Despite the decrease in the number of patients sent for overseas treatment, government expenditure remains at a high. Government has sourced alternatives for overseas treatment, and has Memorandum of Understandings (MoU) signed with Fortis Hospital and Apollo Hospitals in India. Both hospitals have had their first group of Samoan patients referred for medical treatment, returning with positive stories of their treatments.

[9]Ministry of Health. 2016. *National Health Account for Financial Year 2014-15 Report.* Apia
[10]National Health Service. 2017. *Overseas Medical Treatment Report for Financial Years 2014/15 & 2015/16*. Apia

Figure 8: Waiting time in emergency department, general outpatient, triaging reduced.

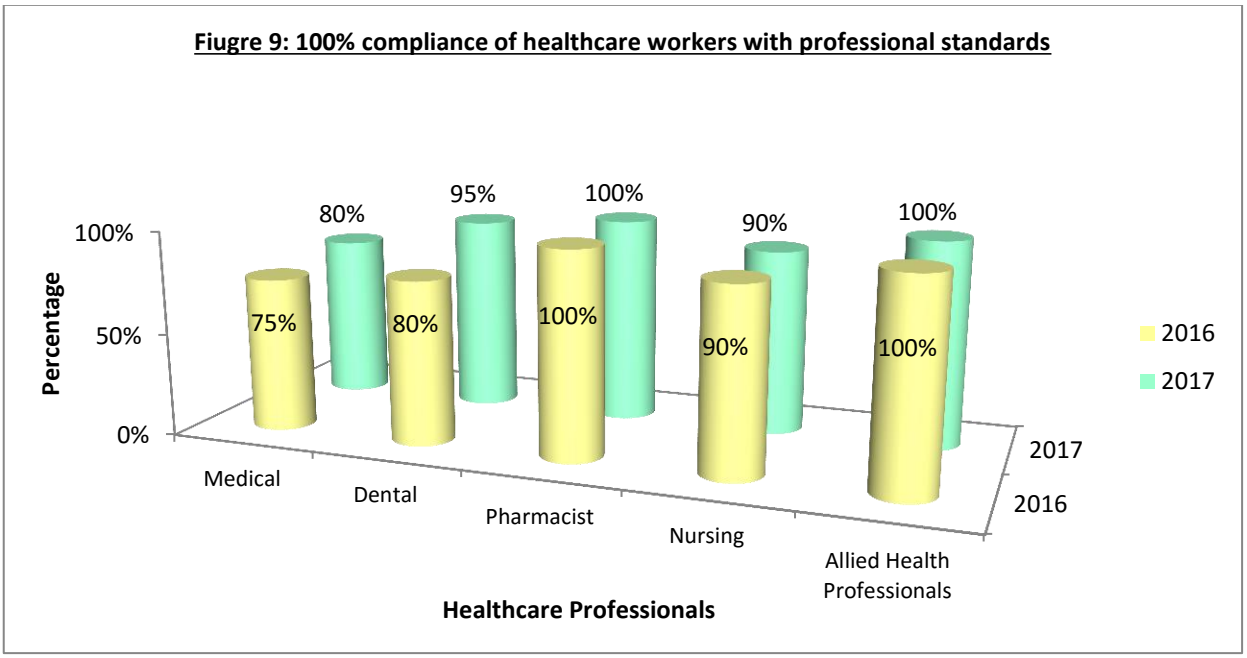


As shown in the above graph, there is a reduction in the percentage of patients waiting time within or less than an hour. The improvement in 2017 of 5.6% of people having to wait less than an hour to be seen by a Doctor clearly shows the increase in numbers of healthcare workers providing healthcare services. For triaging and general outpatient, there has not been an improvement on patients' waiting time. Both services have increased the time patients have to wait in order to be seen. Effective interventions need to be in place to ensure waiting time at the referral hospital is reduced and patients are seen within a minimum amount of time.

100% compliance of healthcare workers with professional standards

The 100% compliance of healthcare professionals to their professional standards refers to the entire commitment of healthcare workers in satisfying their professions professionals' standards and therefore no complaints received from the general public in performing their services.

The compliance of healthcare workers with their professional standards was at an average of 93% in 2017. Only pharmacists and allied health professionals achieved 100% compliance while the medical, nursing, and dental professions achieved 80%, 90% and 95% compliance respectively.



Health information system implemented

Health information remains the biggest challenge in the health sector. The Patient Information System (PatIS) was developed in 1998 and upgraded in 2009 and records only information of patients who visit and/or admitted to public health facilities. Thus, the health sector during its annual reviews every year discussed a system to replace the current system to capture both clinical and public health information to ease data / information collection, collation, analysis and reporting for decision making.

The development of a new health sector information system saw the set-up of the e-health project in 2015. The e-Health Taskforce have been working to finalize and secure logistics and administrative arrangements. A contracting firm has been earmarked, and finalization of the contract is underway who will see the implementation of the e-health strategy and plan. This project is fully funded by the Asian Development Bank (ADB) and the Government of Samoa (GoS).

While the e-health project is still in its planning phase, the Ministry and its sector partners has continued to use the PatIS, and manual recording of information at the district hospitals and health centres. Alternative systems have been developed to collect and record health information. An electronic EPI database was developed, the Cancer Registration set-up by the Samoa Cancer Society, the Communicable Diseases Syndromic Reports by the Surveillance team and health statistical bulletins and newsletters by the Ministry of Health's Health Information and ICT Division.

Table 8: SDS Key Outcome 6: Strategic Outcome 4

Strategic Outcome 4:	**Management and response to disasters, emergencies and climate change improved.**			
Indicators	**Baseline**	**Target**	**Progress**	**Status**
100% compliance with disaster and climate resilience plans	2014	Not defined	Resilient plans were developed and distributed to health facilities in 2017. Implementation and compliance of health facilities with these plans will be realized in the new Health Sector Plan. (MOH, 2018)	**Partially achieved**

The Climate Adaptation Strategy for Health (CASH) was developed in 2014. It follows the World Health Organization (WHO) Climate Resilience framework that operates under five key strategic areas (KSAs).

- KSA 1 Health governance, policy and management;
- KSA 2 Cross-sectoral collaboration and partnership;
- KSA 3 Capacity Development;
- KSA 4 Vulnerability and adaptation assessment and
- KSA 5 Cross sectoral prevention and risk management.

Climate change and health has cross cutting issues with non-health sectors therefore cross sectoral prevention and climate risk management is an important part of health prevention and climate resilience as health risks are determined by conditions in other sectors. Work plan for CASH is guided by the five KSAs and implementation of the work plan is supported by all responsible Divisions of the Ministry of Health. In 2015, the Public Service Commission approved the official establishment of the Climate Change and Health Unit under the Health Sector Resourcing and Monitoring Division (HSCRMD). Since then, much of the work has been focused on KSA 1 which led to the development of CASH and the work plan.

Furthermore, the emphasis has been focused on health and climate change awareness and more importantly building network not only within the Health Sector agencies but across sectors. Implementation of the CASH Work plan is a major challenge due to minimal funds. Most of its activities were implemented through SWAp Counterpart funds and the WHO Biennium Budget.

It is not accurate to determine 100% compliance with health disaster risk management and climate resilience plans at the moment since the development and distribution of these plans were held in the 2017. The true measure of this indicator will be realized in the new sector plan.

The newly approved Disaster Risk Management Strategy for the Health Sector 2017 aims to promote disaster risk management (DRM) across the health sector. The objective of the DRM Strategy is to enhance knowledge, abilities and capacities at all levels for disaster prevention, preparedness, response and recovery within the Health Sector. The DRM Strategy seeks to build capacity for DRM and addresses identified gaps across the sector agencies both public and private and the community. A detailed list of recommendations provided during the health sector consultative process will be followed up and monitored by MoH to ensure it meets a high level of compliance during the lifespan of the current SDS.

2.2 Sector Performance against 7 Key Outcomes of the Health Sector Monitoring and Evaluation Framework:

As stated earlier, the performance of the health sector in the last five years of Health Sector Plan 2008-2018 was measured against the seven key outcomes of the Health Monitoring and Evaluation Operations Manual 2011 as recommended in the Health Sector Plan mid-term review in 2013. These 7 key outcomes include:

(i) Improved healthy living through health promotion and primordial prevention;
(ii) Improved prevention, control and management of chronic diseases (NCDs);
(iii) Improved prevention, control and management of communicable diseases;
(iv) Improved sexual and reproductive health;
(v) Improved maternal and child health;
(vi) Improved health systems, governance and administration; and
(vii) Improved risk management and response to disasters, emergencies and climate change.

These key outcomes contribute to addressing the following five revised top priorities of the health sector which include:

(i) Sustaining healthy lifestyles and strengthened preventive services focusing on social determinants;
(ii) Prevention, control and management of Non-Communicable diseases including injury, mental health and disability;
(iii) Strengthen and improve all aspects of maternal and child health;
(iv) Health impacts of climate change and disasters; and
(v) Emerging and re-emerging communicable diseases and neglected tropical diseases.

From 2014 to 2018, the health sector was able to implement and achieve some indicators of the revised key outcomes, while others could not be achieved. Despite a number of indicators not achieved, the health sector worked to develop and implement interventions and programs to address and respond to the priorities of health identified. Detailed information on the implementation of the indicators is provided below.

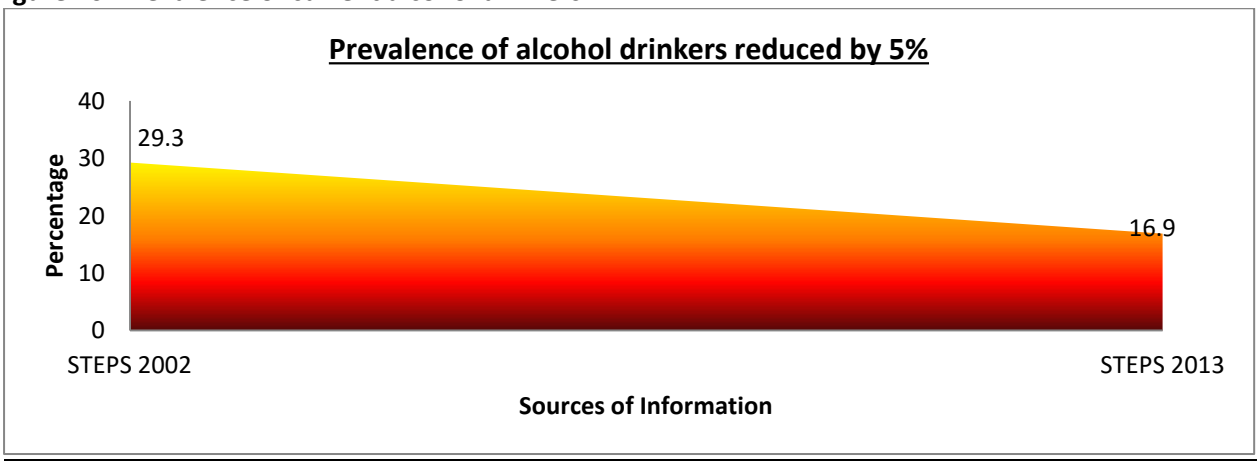
2.2.1 Key Outcome 1: Improved healthy living through health promotion and primordial prevention

Indicators	Baseline	Target by 2018	Interim Measure	Progress to Date	Status
Prevalence of current alcohol drinkers	29.3% (STEP Survey 2002)	26.5% decrease	16.9% (STEP Survey 2013)	12.4% decrease	**Achieved**
Prevalence of current smokers	40.3% (STEP Survey 2002)	20.15% decrease	27.1% (STEP Survey 2013)	13.2% decrease	**Partially achieved**
Prevalence of people who are physically active	32.6% (STEP Survey 2002)	95% increase	61.1% (STEP Survey 2013)	28.5% increase	**Partially achieved**
Proportion of population who eat at least 2 – 3 servings of fruits and vegetables per day.	31.9% women, 33.3% men **(STEPS 2002)**	50% decrease by gender	6% women & 16% men consuming 3+ servings per day (SDHS 2014)	Women – 25.9% decrease Men – 17.3% decrease	**Not Achieved.**

Prevalence of current alcohol drinkers

Indicators	Baseline	Target by 2018	Interim Measure	Progress to Date	Status
Prevalence of current alcohol drinkers	29.3% (STEP Survey 2002)	26.5% decrease	16.9% (STEP Survey 2013)	12.4% decrease	**Achieved**

Figure 10: Prevalence of current alcohol drinkers:



Source: STEP Survey 2002 & 2013

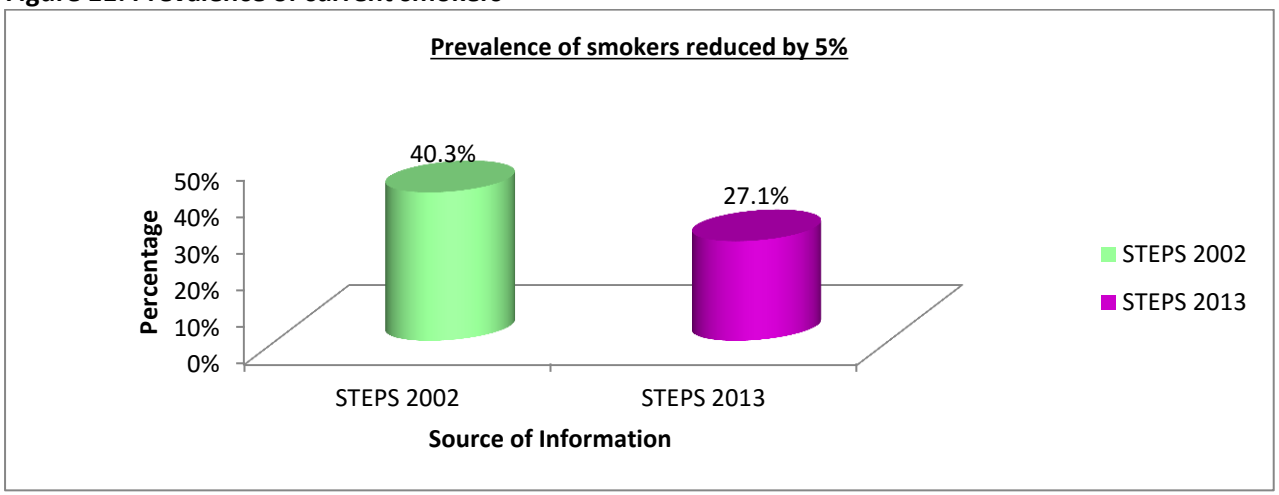
Several programs have been implemented and conducted targeting the schools, village communities and sports clubs on the harmful effects of alcohol. These programs included multi-media campaigns through television, radio spots, and printed media materials. Alcohol Control contributes to many health issues, and its inclusion in campaigns like Injury Prevention spearheaded by the Road Safety Committee, 'Say No to Violence' by the Ministry of Women, Community and Social Development (MWCSD), and the Samoa National Youth Council (SNYC) campaign on "drink driving" promotes awareness. Alcohol abuse contributes to poor decision making which sometimes lead to suicide, mental illness, teenage pregnancies and getting infected by STI's.

The Integrated Community Health Approach Program (ICHAP) is one of intervention that not only addresses alcohol control. During the 2017 ICHAP survey, 19.8% of respondents reported binge drinking of having more than 5 alcoholic beverages at the time. Most of the people more likely to consume more than 5 alcoholic beverages at a time were males and 6.8% of female.[iii]

The collaborative effort of most of the NGO's in addressing the current social issues associated and caused by binge drinking has been conducted over the years. However, a more vigorous approach to alcohol awareness programs together with a multi-sectoral approach to control alcohol consumption will assist reduce alcohol drinkers' prevalence rate.

Prevalence of current smokers

Figure 11: Prevalence of current smokers



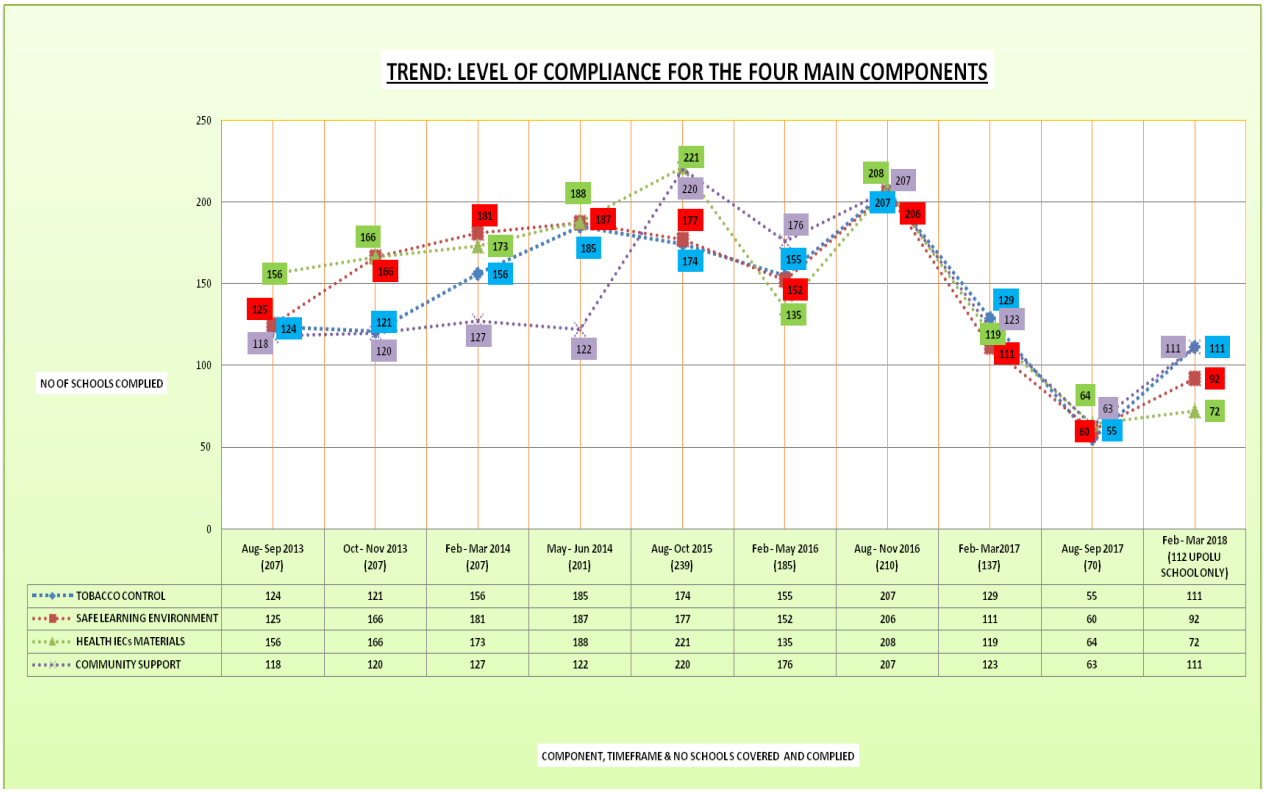
Source: STEP Survey Reports 2002 & 2013

Indicators	Baseline	Target by 2018	Interim Measure	Progress to Date	Status
Prevalence of current smokers	40.3% (STEP Survey 2002)	20.15% decrease	27.1% (STEP Survey 2013)	13.2% decrease	**Partially achieved**

As one of the risk factors of NCD, tobacco smoking is one of the major concerns in health despite the decrease of its prevalence rate from 2002 to 2013. There has been an ongoing effort by the Government of Samoa through the Health Sector to strengthen the system and mechanisms for tobacco control. Public consultations on the new Tobacco Control Act and its amendments, tobacco enforcement and related articles of the Framework Convention on Tobacco Control (FCTC) were conducted to provide education and awareness on the harmful impacts of tobacco. Very recently, Samoa has joined the Parties to the WHO FCTC by signing the Protocol to Eliminate Illicit trade in Tobacco Products. This is another milestone for tobacco control and the efforts in Samoa to control tobacco smoking. This will come into effect in September 2018.

Pictorial health warnings are part of the Tobacco Control Regulations. It is now mandatory for all cigarette packs to display health warning. The front of the package takes up 30% of the space and 90% is reserved for the back of the pack as articulated in the Act. With the increase in taxes by 5%, the concern remains with price control as it is now mandated under the Consumer and Competition Act 201. This defeats our efforts of increasing prices to decrease the consumer demand.

Sports have long been partners with tobacco industry. This has changed over the years as schools and sporting events have been utilized to advocate health messages and increase awareness on the adverse effects of tobacco products. In the last five years, sports such as netball, rugby, soccer, touch rugby and boxing have joined to promote smoke-free programs and tournaments. Schools have gone beyond that concept and have made all school compounds smoke free.

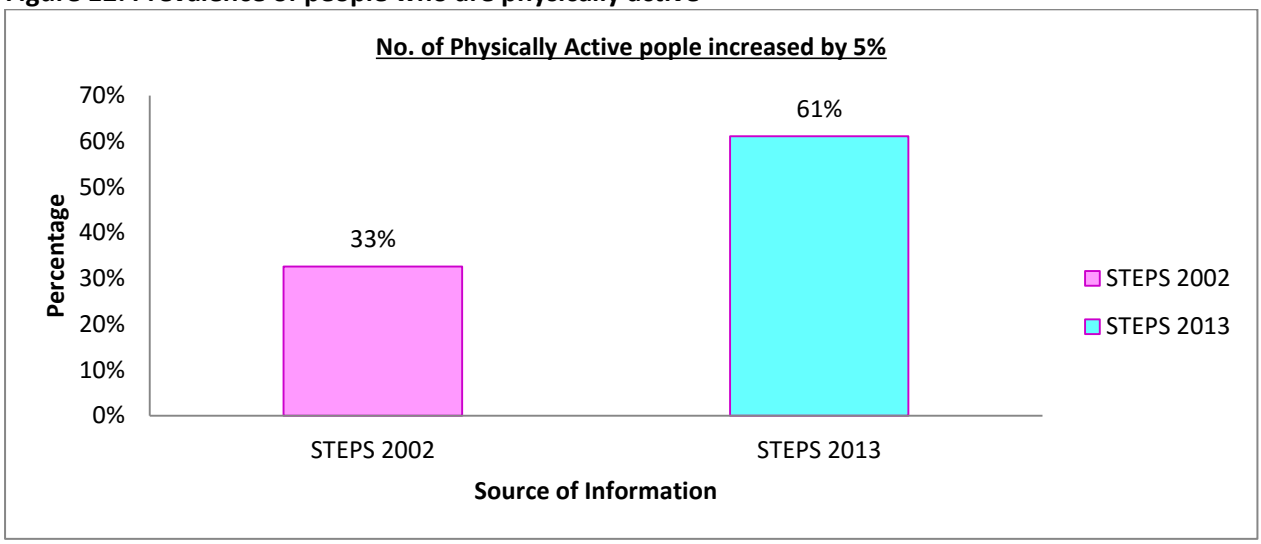


	Aug- Sep 2013 (207)	Oct - Nov 2013 (207)	Feb - Mar 2014 (207)	May - Jun 2014 (201)	Aug- Oct 2015 (239)	Feb - May 2016 (185)	Aug - Nov 2016 (210)	Feb- Mar2017 (137)	Aug- Sep 2017 (70)	Feb - Mar 2018 (112 UPOLU SCHOOL ONLY)
TOBACCO CONTROL	124	121	156	185	174	155	207	129	55	111
SAFE LEARNING ENVIRONMENT	125	166	181	187	177	152	206	111	60	92
HEALTH IECs MATERIALS	156	166	173	188	221	135	208	119	64	72
COMMUNITY SUPPORT	118	120	127	122	220	176	207	123	63	111

Regular Monitoring in Schools of tobacco control programs and other health programs shows an increase in school compliance. Schools are not monitored together all the same time because of limited resources. However, an average compliance rate of 70%- 80% of all schools on the tobacco control component. Smoke-free settings have been established not only in schools, markets and all other public places. Health education through mass media campaigns and community advocacies is ongoing through the Ministry of Health and its sector partners, and NGOs such as Samoa Cancer Society promoting the harmful effects of tobacco products. The tobacco control program is monitored through the National Tobacco Control Committee chaired by the Ministry of Health and consists of government ministries and corporations such as MOR, MOF, MCIL, MESC, MWSCD, NCC, LTA, MOP, AG, MFAT, Samoa Cancer Society.

Prevalence of people who are physically active

Figure 12: Prevalence of people who are physically active



Source: STEP Survey Reports 2002 & 2013

Indicators	Baseline	Target by 2018	Interim Measure	Progress to Date	Status
Prevalence of people who are physically active	32.6% (STEP Survey 2002)	95% increase	61.1% (STEP Survey 2013)	28.5% increase	**Partially achieved**

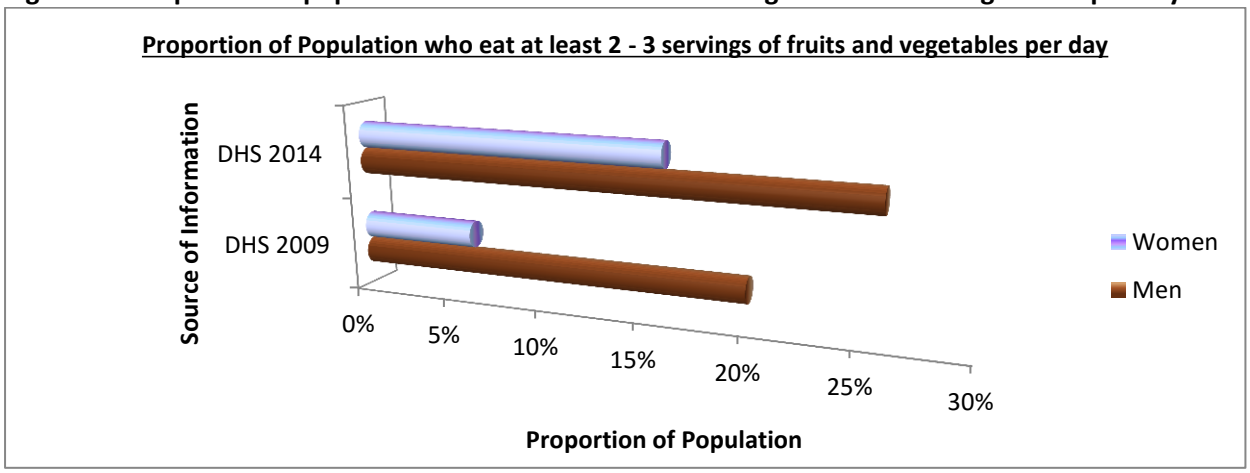
Physical Activity Program correlates with all other risk factors of NCDs especially Nutrition towards achieving healthy living. Physical Activity awareness programs were initially conducted using the SNAP (Smoking, Nutrition, Alcohol Control, Physical Activity) educational program in communities and church organizations. SNAP has been integrated into the ICHAP so it can be monitored with all other health issues.

There were 210 physical activity programs initiated and sustained by various villages and organizations through Zumba and aerobics over the last 10 years. The introduction of the physical activity program through aerobics was initiated by the Prime Minister in 2008 to encourage all villages and organization to do Zumba and aerobics sessions using the National Physical Activity guidelines.

More people are now involved in sports and other recreational programs such as gyms, boot camps through different advocacy groups as previously mentioned. As indicated in the ICHAP survey 2017 report, 68.8% of overall respondents reported being physically active for at least 30minutes a day with the most common activities reported as walking, dancing, Zumba or household chores. The establishment of the National Physical Activity Committee in 2016 was a result of the ongoing efforts to accelerate physical activity programs through sports and other recreational programs.

Proportion of population who eat at least 2 – 3 servings of fruits and vegetables per day

Figure 13: Proportion of population who eat at least 2-3 servings of fruits and vegetables per day:



Source: STEP Survey Report & Demographic and Health Survey 2014

Indicators	Baseline	Target by 2018	Interim Measure	Progress to Date	Status
Proportion of population who eat at least 2 – 3 servings of fruits and vegetables per day.	31.9% women, 33.3% men **(STEPS 2002)**	50% decrease by gender	6% women & 16% men consuming 3+ servings per day (SDHS 2014)	Women – 25.9% decrease Men – 17.3% decrease	**Not Achieved.**

Several programs and campaigns have been conducted by the Ministry during this period to promote consumption and growing of fruits and vegetables.

They are:

- School Nutrition Standards was developed in 2012 to guide, encourage and monitor compliance of schools to healthy eating;
- School Fruit Tree program to encourage schools to plant and eat fruits and vegetables;
- The Aiga ma Nuu Manuia Program in collaboration with the Ministry of Women, Community and Social Development has set up community vegetable gardening to encourage growing local fruits and vegetables and increase consumption of fruits and vegetables;
- SPAGHL, a group of Parliamentarians lobbying and advocating for health;
- Quarterly monitoring of shops and supermarkets for availability, variety and quality of fruits and vegetables being sold for consumption
- SACEP programme in partnership with the Ministry of Agriculture and Fisheries (MAF) to promote the planting and consuming of local fruits and vegetables.

There are factors that affect the levels of consumption and results in the decline in fruits and vegetables consumption. These factors include affordability – the high costs of fruits and vegetables, availability – short supply after natural disasters, pests and diseases affecting local crops and fruits and vegetables. Added on are the tariffs applied to imported fruits and vegetables and impacting on the costs and affordability as compared to the lesser healthier options in shops, supermarkets and food markets. These affect personal choices and consumption of fruits and vegetables.

In the latter years of the Health Sector Plan 2008-2018 (2015), more campaigns such as "Eat the Rainbow" and "Let's Go Local" promotes the consumption of 5 plus servings of fruits and vegetables. The campaigns were initially developed to target the young children as a form of primordial prevention to encourage and introduce eating fruits and vegetables in their diets at an early age. These health promotion campaigns have been promoted to all age groups including pregnant and breastfeeding mothers, infants, adolescents, adults and the elderly.

Key Outcome 1 Overall Summary

There is only one indicator under Key Outcome 1 that was achieved within these ten years i.e. prevalence of current alcohol drinkers. The two indicators that are partially achieved include: prevalence of current smokers and prevalence of people who are physically active. The indicator that did not achieve within this plan's lifetime was the proportion of population who eat at least 2 – 3 servings of fruits and vegetables per day. Even though the health sector had developed and implemented many programs and interventions trying to address the aforementioned indicators, there is a dire need to relook at these strategies and interventions and identify gaps to be considered in the next sector plan.

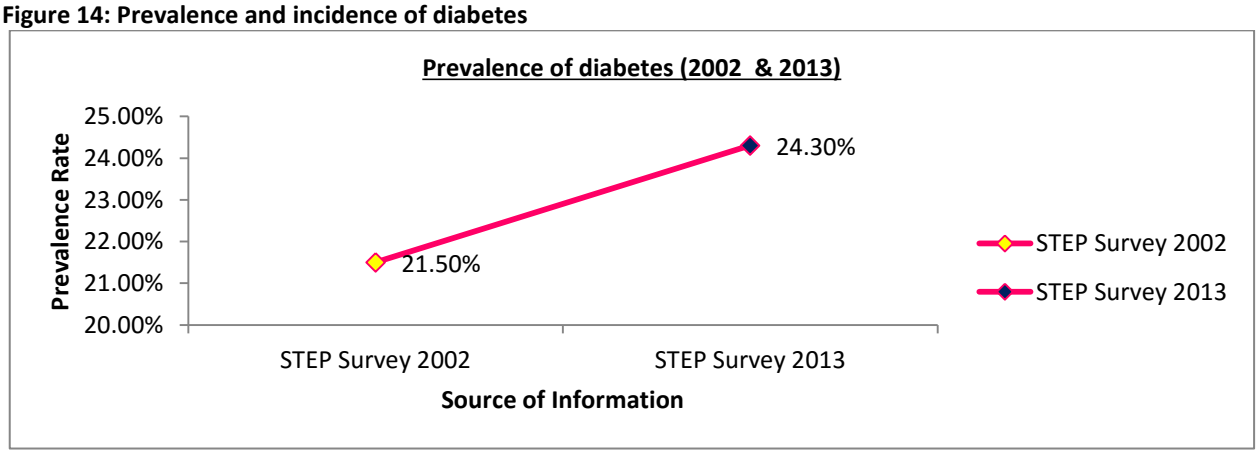
2.2.2 Key Outcome 2: Improved prevention, control and management of chronic diseases (Non-Communicable Diseases)

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence and incidence of diabetes		25-50% decrease (Prevalence of 16.1 – 10.75%)	24.3% (STEPS 2013)	2.8% increase	**Not Achieved**
Prevalence of hypertension	Prevalence: 21.2% (STEP Survey 2002)	40% decrease (12.7%)	Prevalence: 24.5% (STEPS Survey 2013)	3.3% increase	**Not Achieved**
Prevalence of overweight and obesity.	Prevalence: Overweight 85.6% Obese 56.0% (STEP Survey 2002)	25% decrease (63.9%)	Prevalence: Overweight:89.1 % Obese: 63.1% (STEP Survey 2013)	Overweight – 3.5% increase Obese – 7.1% increase	**Not Achieved**

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence and incidence of rheumatic heart disease	Number of cases: 115 (NHS RHD 2011)	90% compliance 100% school children screened Incidence 75% decrease	Number of cases: 54 new cases (NHS RHD 2016)	New cases – 61% decrease	**Partially achieved**
Prevalence of cancer (2-3 most common types)	Number of admission: Lung cancer: 13 Breast Cancer: 12 Stomach Cancer:12 (MOH 2008)	Not defined	Number of admission: Lung cancer: 26 Breast Cancer: 19 Stomach Cancer: 17 (MOH 2017)	**Cancer Prev.by most common types:** Lung: 13% increase Breast: 7% increase Stomach: 5% increase	**Partially achieved**
Number of attempts and deaths associated with suicide declines.	Total No. of Suicide Cases: 48 Attempts: 37 Deaths: 11 (MOH 2011)	Reduce by ½ (50%)	Total No. of Suicide Cases: 44 Attempts: 26 Deaths: 19 (MOH 2017)	Attempts – reduced by 4 cases Deaths – increase by 8 cases	**Partially achieved**
Injuries in children < 15 years	290 per 1000 admissions (MOH 2012)	50% decrease (184)	141 per 1000 admissions (MOH 2015)	50% decrease	**Achieved**

Prevalence of diabetes

Figure 14: Prevalence and incidence of diabetes



Source: STEP Survey Reports 2002 & 2013

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence and incidence of diabetes	Prevalence: 21.5% (STEP Survey 2002)	25-50% decrease (Prevalence of 16.1 – 10.75%)	24.3% (STEPS 2013)	2.8% increase	**Not Achieved**

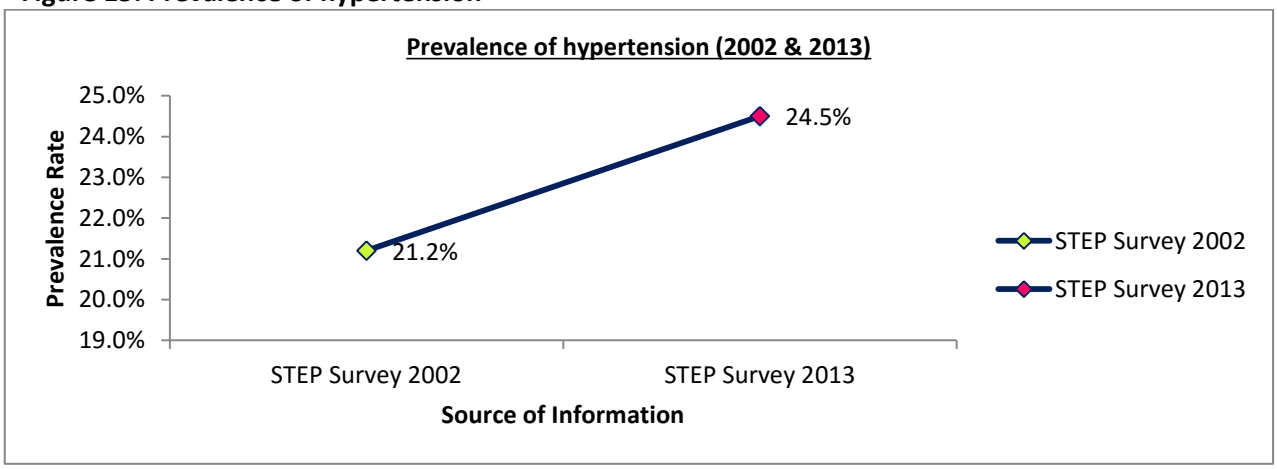
The prevalence of diabetes is gradually increasing. This is also reflected in the results of the DHS in 2014. There is an increase in the percentage of household members aged 25 and above diagnosed with diabetes[11]. This indicates that diabetes have positive relationship with the reduction in proportion of Samoan people consuming at least 2-3 servings of fruits and vegetables on daily basis.

[11]Samoa Bureau of Statistics. 2014. *Samoa Demographic and Health Survey.* Apia

Prevalence of hypertension

Similar to diabetes, there is also a gradual increase in the prevalence of hypertension from 2002 to 2013. Of the 24.5% in 2013, 66% of them were newly diagnosed as hypertensive patients.[12] In comparison to the results of the 2002 survey, the percentage of people with raised blood pressure has not changed significantly. This indicates the better response from the health services towards early screening and treatment as more people are currently on medication for high blood pressure.

Figure 15: Prevalence of hypertension



Source: STEP Survey Reports 2002 & 2013

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence of hypertension	Prevalence: 21.2% (STEP Survey 2002)	40% decrease (12.7%)	Prevalence: 24.5% (STEPS Survey 2013)	3.3% increase	**Not Achieved**

Results of the Salt Survey conducted by George Institute[13] in 2015 also showed an increase in the number of people diagnosed with hypertension. The results confirm the increasing number of people diagnosed with hypertension and added to the growing list of NCD cases. The three criteria used to classify the diagnosis are:

Table 10: Hypertension Criteria

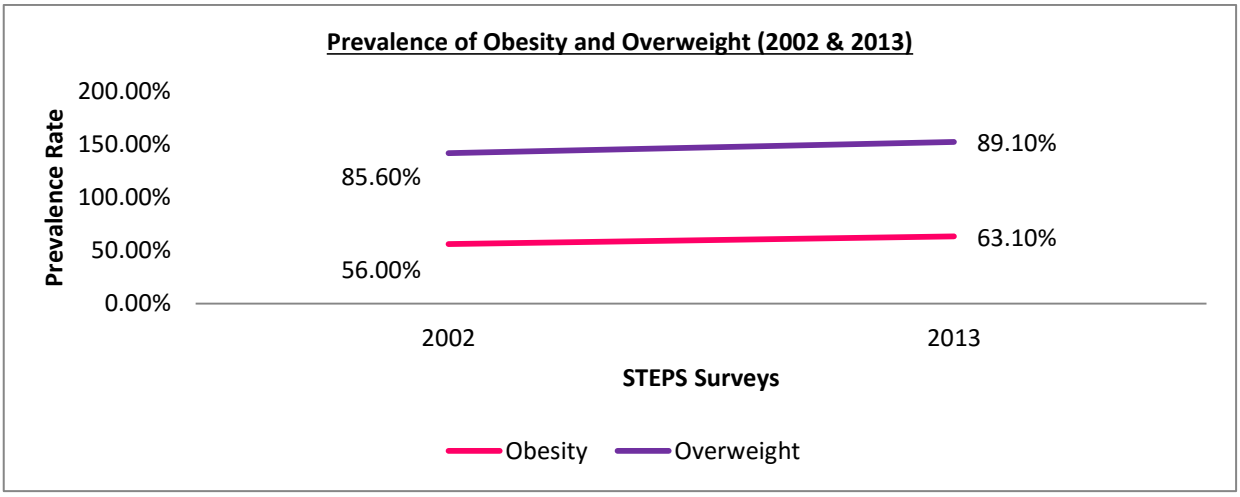
HYPERTENSION CRITERIA	2013	2015
With hypertension diagnosed by a doctor or health worker (history of hypertension)	8.0%	28.1
With hypertension based on measured high BP (SBP ≥140mmHg or DBP ≥90mmHg) during survey	20.6%	34.7%
With hypertension based on measured BP during the survey and history of HTN	24.8%	49.6%

Prevalence of overweight and obesity

The prevalence of overweight is gradually increasing while the increase in prevalence of obesity is significant. The results indicate that Samoa's population of overweight and obese is gradually increasing. This places a significant proportion of the population at risk of developing co-morbidities and vulnerable to increased mortality rates, thus making overweight and obesity significant public health problems in Samoa.

[12]Ministry of Health & WHO. 2013. *NCD Risk Factor STEPwise Survey 2013.* Apia
[13]Ministry of Health, 2015. *Salt Monitoring Survey 2015*. Apia

Figure 16: Prevalence of overweight and obesity



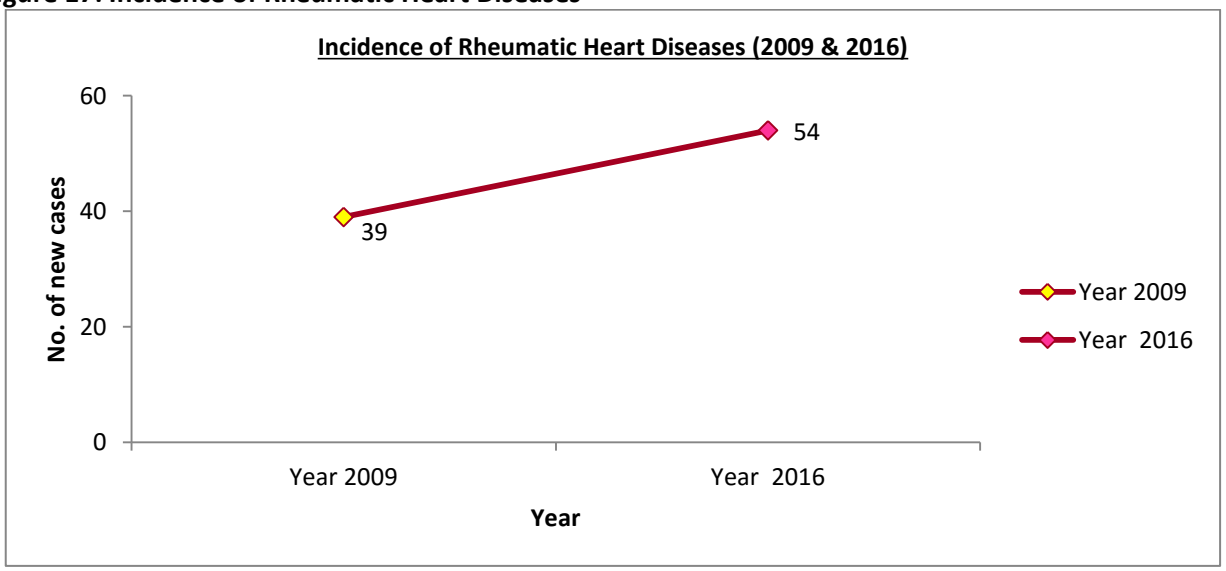
Source: STEP Survey Reports 2002 & 2013

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence of overweight and obesity.	Prevalence: Overweight 85.6% Obese 56.0% (STEP Survey 2002)	25% decrease (63.9%)	Prevalence: Overweight:89.1 % Obese: 63.1% (STEP Survey 2013)	Overweight – 3.5% increase Obese – 7.1% increase	**Not Achieved**

Incidence of rheumatic heart disease

As noted from Figure 17, incidences of Rheumatic Heart Disease (RHD) have increased from 39 cases in 2009 to 54 cases in 2016. This is an increase of 15 cases over a span of 8 years.

Figure 17: Incidence of Rheumatic Heart Diseases

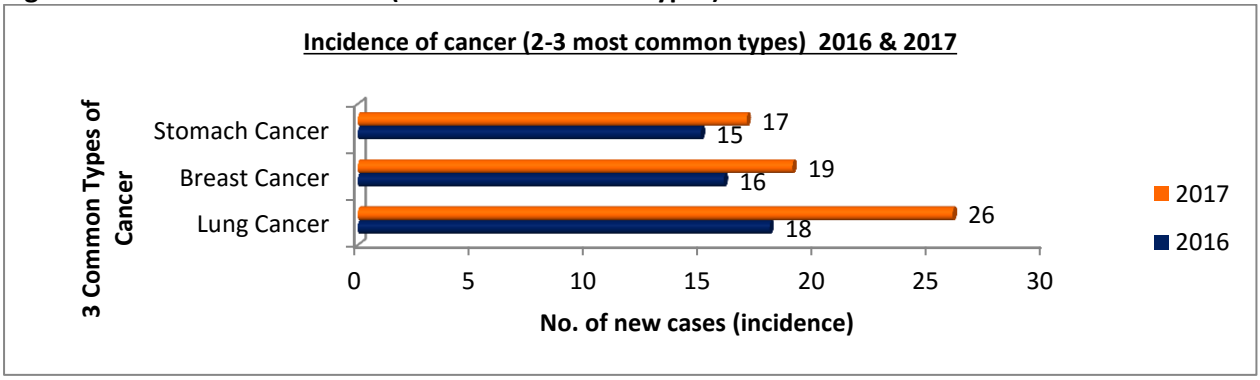


Source: NHS RHD Reports 2009 & 2016

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence and incidence of rheumatic heart disease	Number of cases: 115 (NHS RHD 2011)	90% compliance 100% school children screened Incidence 75% decrease	Number of cases: 54 new cases (NHS RHD 2016)	New cases – 61% decrease	**Partially achieved**

Prevalence of cancer (2-3 most common types)

Figure 18: Prevalence of cancer (2 – 3 most common types)



Source: Ministry of Health Monitoring Reports 2016 & 2017

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Prevalence of cancer (2-3 most common types)	Number of admission: Lung cancer: 13 Breast Cancer: 12 Stomach Cancer:12 (MOH 2008)	Not defined	Number of admission: Lung cancer: 26 Breast Cancer: 19 Stomach Cancer: 17 (MOH 2017)	Lung: 13% increase Breast: 7% increase Stomach: 5% increase	**Partially achieved**

The three (3) most common cancer types are Lung, Breast and Stomach. All three common cancers have increased the number of cases between 2016 and 2017. Lung cancer has increased from 18 to 26 cases – an increase of 8 cases in one year. Breast cancer has increased from 16 to 19 cases – an increase of 3 cases in one year. For stomach cancer, the increase is from 15 to 17 – an increase of 2 cases in one year.

In an unpublished report[14], and demonstrated below the prevalence of cancer among Samoan people appears to rise with variation at different intervals. Cancer prevalence refers to the total number of people diagnosed and having cancer at a particular time.

Table 11: Cancer Prevalence in Samoa from 2006-2016

Year	No. of cases	Population	Prevalence	%
2007	55	182,286	0.0003	3
2008	69	183,526	0.00037	3.7
2009	64	184,826	0.00035	3.5
2010	80	186,205	0.00043	4.3
2011	104	187,665	0.00055	5.5
2012	132	189,194	0.0007	7
2013	104	190,757	0.00055	5.5
2014	136	192,290	0.00071	7.1
2015	109	193,759	0.00056	5.6
2016	137	195,125	0.0007	7

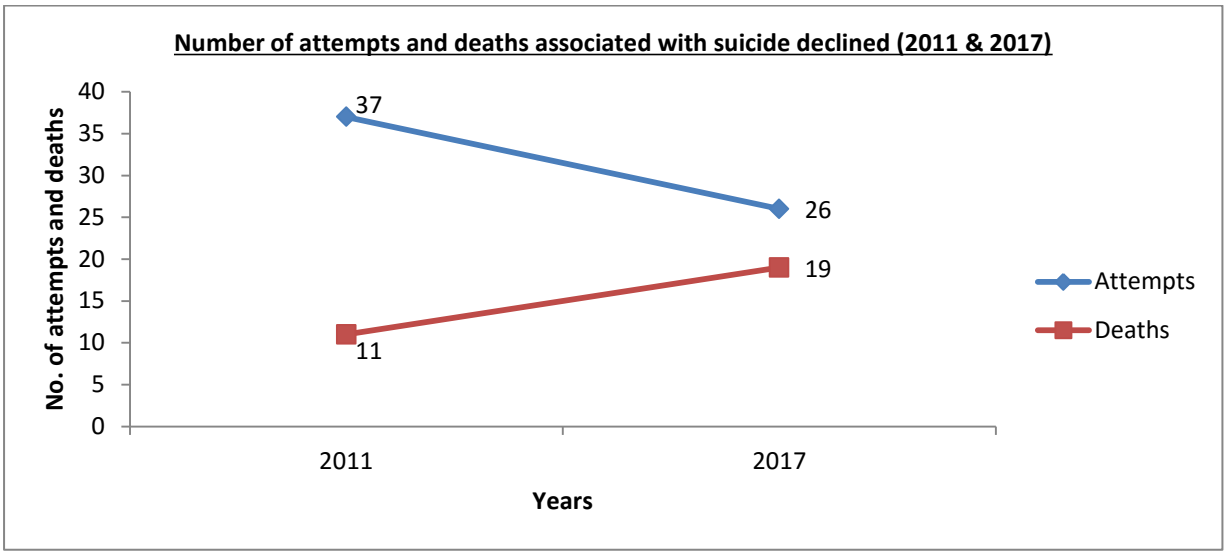
Source: Amosa-Lei Sam, F. (2017) Unpublished Report: Socio-Demographic Risk Factors Profile, Prevalence, Treatments and Outcomes of Cancer in Samoa: A 10 year retrospective study 2007-2016

Cancer prevalence increased from 2007 until 2008. It steadily rose again in 2009 and peaked in 2012 before it dropped again in 2013. Again it increased in 2014 before dropping again in 2015, and increasing again in 2016[15].

[14] *Amosa-Lei Sam, F. (2017) Unpublished Report: Socio-Demographic Risk Factors Profile, Prevalence, Treatments and Outcomes of Cancer in Samoa: A 10 year retrospective study 2007-2016. p.91-93*

Number of attempts and deaths associated with suicide declines.

Figure 19: Number of attempts and deaths associated with suicide declined



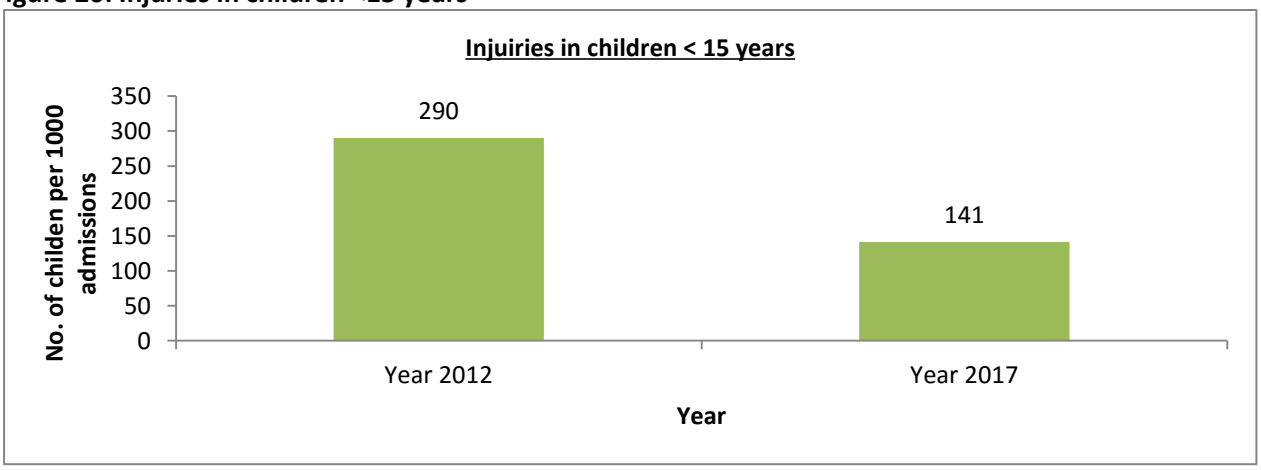
Source: MOH Reports 2011 & 2017

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Number of attempts and deaths associated with suicide declines.	Total No. of Suicide Cases: 48 Attempts: 37 Deaths: 11 (MOH 2011)	Reduce by ½ (50%)	Total No. of Suicide Cases: 44 Attempts: 26 Deaths: 19 (MOH 2017)	Attempts – reduced by 4 cases Deaths – increase by 8 cases	**Partially achieved**

The number of suicide attempts has declined over the years while the number of suicide deaths has increased. The majority of suicide cases were male (34) compared to female (10) at the youth age range of 20 – 29 years old. Interventions and programs to control suicide in Samoa need to be developed in order to reduce the high number of suicide deaths.

Injuries in children < 15 years

Figure 20: Injuries in children <15 years



Source: MOH Reports 2012 & 2015)

[15] *Amosa-Lei Sam, F. (2017) Unpublished Report: Socio-Demographic Risk Factors Profile, Prevalence, Treatments and Outcomes of Cancer in Samoa: A 10 year retrospective study 2007-2016*

Indicators	Baseline	Target By 2018	Interim Measure	Progress to Date	Status
Injuries in children < 15 years	290 per 1000 admissions (MOH 2012)	50% decrease (184)	141 per 1000 admissions (MOH 2015)	50% decrease	**Achieved**

The number of children aged less than 15 years admitted to hospital for injuries has declined since 2012 as illustrated in Figure 20 above. This trend is inspiring and it indicates the effectiveness of multi-media campaign conducted for injury prevention.

Key Outcome 2 Overall Summary

Overall, the health sector was able to achieve only 1 out of 7 indicators (injuries in children <5 years) under Key Outcome 2 while 3 indicators are partially achieved (Prevalence of Rheumatic Heart Disease; Number of suicide attempts and deaths; and prevalence of cancer 2 – 3 common types) and the other 3 indicators (prevalence of diabetes, hypertension and obesity & overweight) that are not achieved by the end of the Health Sector Plan's lifetime.

Although the number of unachieved indicators under this Key Outcome outweighs the number of achieved indicators, the health sector continues to develop and implement control programs and interventions to help improve their response to unachieved indicators. These include ongoing rheumatic heart diseases and cancer screening and advocacy programs, multi-media campaign and counseling provided by the Mental Health Unit, and community organizations such as Fa'atāua le Ola and GOSHEN to help address the rapid growth of suicide. Suicide rates have been particularly high among young males and health sector partners, including NGOs have targeted suicide prevention activities at high-risk populations. This indicator must continue to be monitored in order to determine if this trend can be reversed in the long run.

The Samoa Cancer Society continues to work in partnership with both local and international partners to conduct cancer awareness and advocacy programs. As a community health service provider, they are committed to provide outreach programs to reach more people in the community.

The increase in prevalence of diabetes, hypertension, obese and overweight as discussed above, indicates that Non-Communicable Diseases remain and continue to be a priority for the health sector to address in the next sector plan.

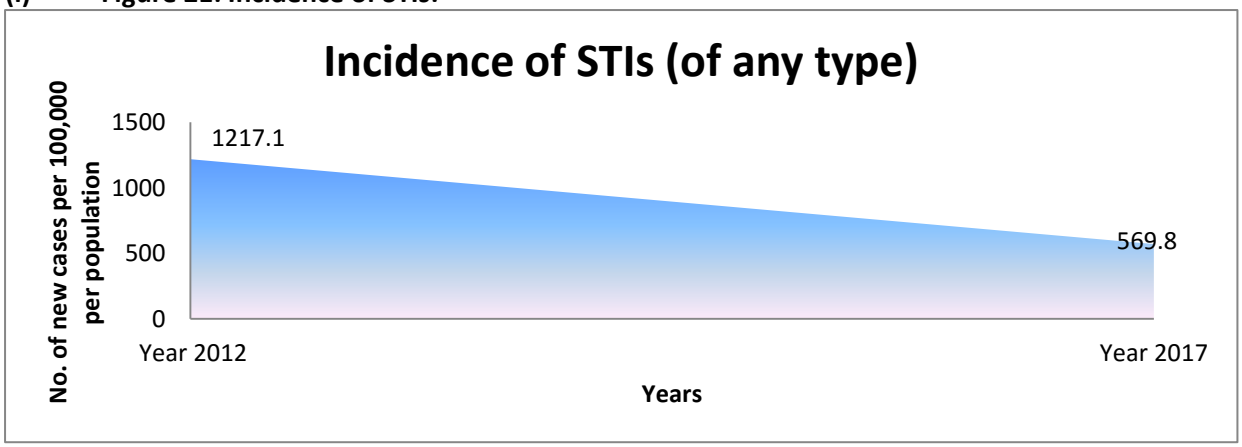
2.2.3 Key Outcome 3: Improved prevention, control and management of communicable diseases

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
Prevalence and incidence of STIs	Incidence: 1217.7 (any STI) per 100,000 population (MOH 2012)	Reduce incidence by 50% (608 (any STI) per 100,000 population	Incidence: 569.8 (any STI) per 100,000 population (MOH 2017)	53.2% decrease	**Achieved**

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
	Prevalence: HIV = 12 living cases Syphillis = 0.10% Hepatitis B = 3% Hepatitis C = 1% Gonorrhea = 5.9% Chlamydia = 20% (MOH 2012)	Not defined	Prevalence: HIV = 11 living cases/1 death Syphillis = 0.70% Hepatitis B = 2.4% Hepatitis C = 0.10% Gonorrhea =10% Chlamydia = 23% (MOH 2018)	HIV = decrease by 1 case Syphilis = 0.60% increase Hep. B = 0.6% decrease Hep. C = 0.90% decrease Gonorrhea = 4.1% decrease Chlamydia = 3% increase	**Partially Achieved.** **Achieved:** - **HIV** - **Hep. B** - **Hep. C** **Not Achieved:** - **Syphilis** - **Gonorrhoea** **Chlamydia**
Prevalence of notifiable diseases and vaccine preventable diseases – including water and food-borne diseases	Prevalence: Typhoid: 0.06% AFR: 0.04% Diarrhea: 2.82% (MoH & NHS Lab 2008)	50% decrease Not defined Not defined	Prevalence: Typhoid: 0.05% AFR: 0.32% Diarrhea: 4.33% (MoH & NHS Lab 2018)	Typhoid = 0.01% decrease AFR = 0.28% increase Diarrhea = 1.51% increase	**Partially achieved**
TB incidence and death rates associated with TB	New cases: 19 Deaths: 2 (MOH 2015)	50% decrease	New cases: 30 Deaths: 6 (MOH 2017)	New cases = increased by 11 cases Deaths = increased by 4 cases	**Not Achieved**
Acute respiratory infections among children under 5 years.	1,131 (PATIS, 2011)	10% decrease	867 (PATIS, 2017)	23.3% decrease	**Achieved**
% of drinking water suppliers complying with National Drinking Water Standards	SWA Boreholes: 33% Water bottled companies: 80% SWA Treatment Plants: 90.1% (MOH 2012)	Not defined	SWA Boreholes: 40% Water bottled companies: 92% SWA Treatment Plants: 98% (MOH 2018)	SWA Boreholes = 7% increase Bottled Water Companies = 12% increase SWA Treatment Plants = 6.9% increase	**Achieved**

Prevalence and incidence of STIs:

(i) Figure 21: Incidence of STIs:



Source of Information: MOH HIV Monitoring Reports 2012 & 2017

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
Prevalence and incidence of STIs	Incidence: 1217.7 (any STI) per 100,000 population (MOH 2012)	Reduce incidence by 50% (608 (any STI) per 100,000 population	Incidence: 569.8 (any STI) per 100,000 population (MOH 2017)	53.2% decrease	**Achieved**
	Prevalence: HIV = 12 living cases Syphillis = 0.10% Hepatitis B = 3% Hepatitis C = 1% Gonorrhea = 5.9% Chlamydia = 20% (MOH 2012)	Not defined	Prevalence: HIV = 11 living cases/1 death Syphillis = 0.70% Hepatitis B = 2.4% Hepatitis C = 0.10% Gonorrhea =10% Chlamydia = 23% (MOH 2018)	HIV = decrease by 1 case Syphilis = 0.60% increase Hep. B = 0.6% decrease Hep. C = 0.90% decrease Gonorrhea = 4.1% decrease Chlamydia = 3% increase	**Partially Achieved.** **Achieved:** - **HIV** - **Hep. B** - **Hep. C** **Not Achieved:** - **Syphilis** - **Gonorrhoea** **Chlamydia**

Prevalence of STIs:

STIs still remains a challenge given the many factors relative to the continuous and consistent increase over the past years. From people that were screened, national surveillance indicates that Chlamydia and Gonorrhea are very high (roughly 1 out of every 5 people tested positive for either in 2017). Syphilis is steadily on the rise since 2015 and is becoming high prevalence for an infection that is usually rare, relative to general populations.

Table 12: Percent of People Testing Positive 2015-2017

STI	2015	2016	2017	Status
Chlamydia	*26%*	*Not Tested*	*20.7%*	*Remains high*
Gonorrhea	*Not Tested*	*Not Tested*	*21.2%*	*Remains high*
Syphilis	*0.30%*	*0.4%*	*0.7%*	***Increasing***

**Data reported by NHS Laboratory Services, represents all specimens tested nationally*

Testing is one of the problematic areas in realizing the true status of STIs in Samoa. According to data collected on STIs from the main hospitals and district hospitals and health centres, testing is still low in the last 10 – 15 years, with only 4-5% of the population tested every year. Testing for any STIs needs to be an integral part of public health intervention. People tested for at least 1 STI increased from **7,853 in** 2016 to 14,727 in 2017 (87.5%). This is a very promising result, as increasing voluntary testing is the best way to control STI rates. Testing links people to care and treatment. Though HIV and Syphilis testing are high, Chlamydia testing is low. There is a need to improve awareness and access to testing services.

In 2016-2017, the HIV, STI and TB programme was scaled up with public awareness efforts in order to increase voluntary testing, promote dialogue on sexual health to reduce stigma, and encourage people to access treatment services. One of these initiatives was the T3 Campaign: Talk it, Test it, Treat it to prevent STI's (Siaki, Talanoa, ma Togafitiga). Throughout 2017, the call volume to the STI Clinic and the Ministry of Health HIV programme office increased significantly after the T3 campaign was launched. More clients were contacting staff to learn more about the services and sexual health. Although this increase in

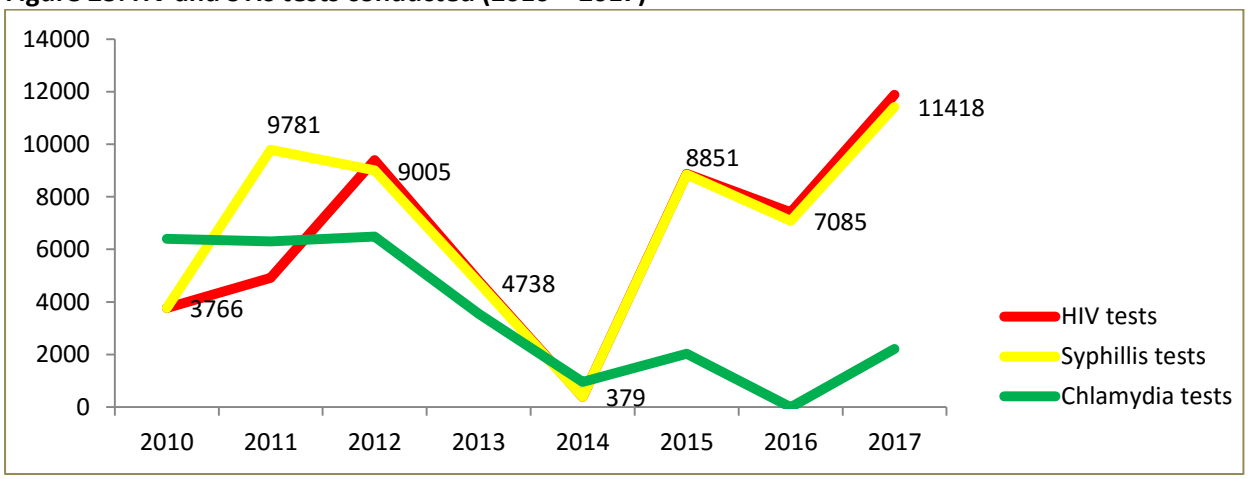
voluntary testing can only be ecologically inferred as a result of the T3 campaign, HIV testing rates have never been higher, nor have increased by such a significant amount in previous years.

Table 13: HIV and STI Tests Conducted from 2010-2017

Testing Coverage	2010	2011	2012	2013	2014	2015	2016	2017
HIV tests	3,765	4,909	9,394	4,807	385	8,870	7,408	11,882
Syphilis tests	3,766	9,781	9,005	4,738	379	8,851	7,085	11,418
Chlamydia tests	6,399	6,306	6481	3,553	961	2,025	0	2,207

**Data reported by NHS Laboratory Services, represents all specimens tested nationally*
*** Data not available for Gonorrhea for all years*

Figure 23: HV and STIs tests conducted (2010 – 2017)



Source: MOH HIV Monitoring Reports (2010 – 2017)

The prevalence of HIV remains low for Samoa, and would like to remain it that way. All HIV cases are on ARVs and are living quality lives at an average of 10 – 15years from the date of infection. However public attitudes and stigmatizing of people with HIV remains high and no person living with HIV feels safe to publicly disclose their status. This poses a great challenge in delivering services to the affected people, as confidentiality is hard to protect in a small population like Samoa.

There have been issues with the implementation of Periodic Presumptive Treatment for Chlamydia in ANC since it started. These issues remain as discussions have not reflected any changes. Documentation is a major issue commonly found in all health facilities. As of 2017, 3,926 out of 4,646 women on their first ANC visit were treated for Chlamydia. This represents an increase in the number of patients compared to 2015, which is likely due to lapse in documentation. This has improved since 2015.

However, the overall population coverage of the treatment since the inception of the protocol in May 2015 has been an ongoing challenge, as ANC attendance is low and delayed until late in the pregnancy and male partners rarely attend ANC care visits with their partners. There is little to no documentation of male partners being treated with Presumptive Treatment. It is estimated that the protocol only reached 33% of the target population.

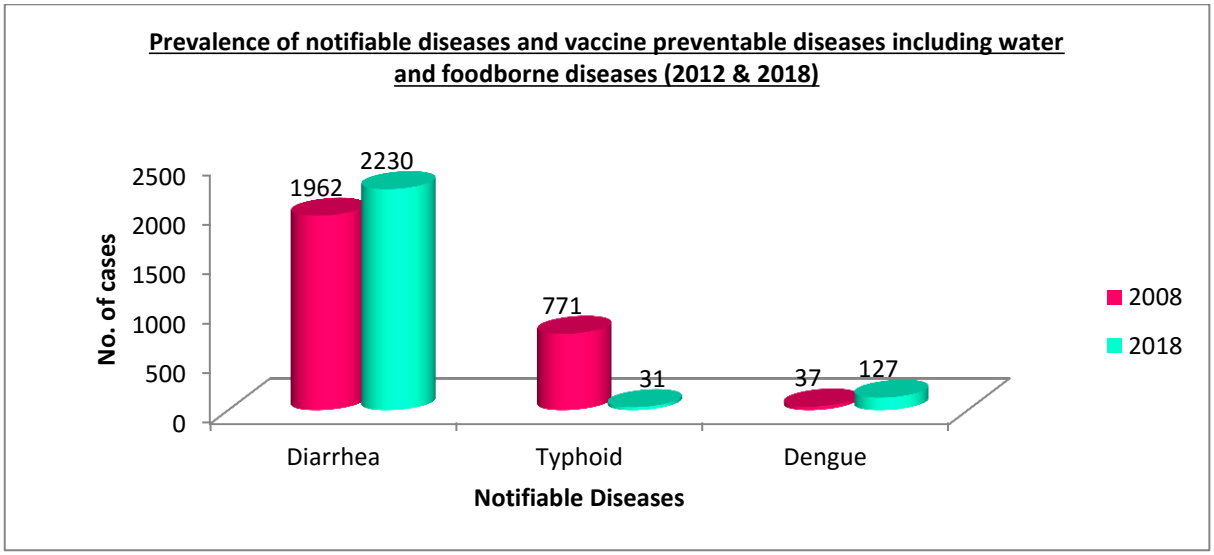
Table 14: Presumptive Treatment during Antenatal Care

Female ANC Patients & their partners	2015	2016	2017
Coverage Rate in Estimated Population	28.70%	20.30%	33.20%

Chlamydia rates remain high despite 3 years of implementation of the program. This means we have not successfully implemented the intervention, and therefore recommended that we discontinue the intervention until strategies can be developed to engage the male population, and implement health education and awareness on Chlamydia which is supposed to be rolled out aggressively to support a presumptive treatment intervention.

Prevalence of notifiable diseases and vaccine preventable diseases – including water and food-borne diseases

Figure 24: Prevalence of notifiable diseases and vaccine preventable diseases including water and food-borne diseases



Source: MOH National Disease Surveillance 200 & 2018

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
Prevalence of notifiable diseases and vaccine preventable diseases – including water and food-borne diseases	Prevalence: Typhoid: 0.06% AFR: 0.04% Diarrhea: 2.82% (MoH & NHS Lab 2008)	50% decrease Not defined Not defined	Prevalence: Typhoid: 0.05% AFR: 0.32% Diarrhea: 4.33% (MoH & NHS Lab 2018)	Typhoid = 0.01% decrease AFR = 0.28% increase Diarrhea = 1.51% increase	**Partially achieved**

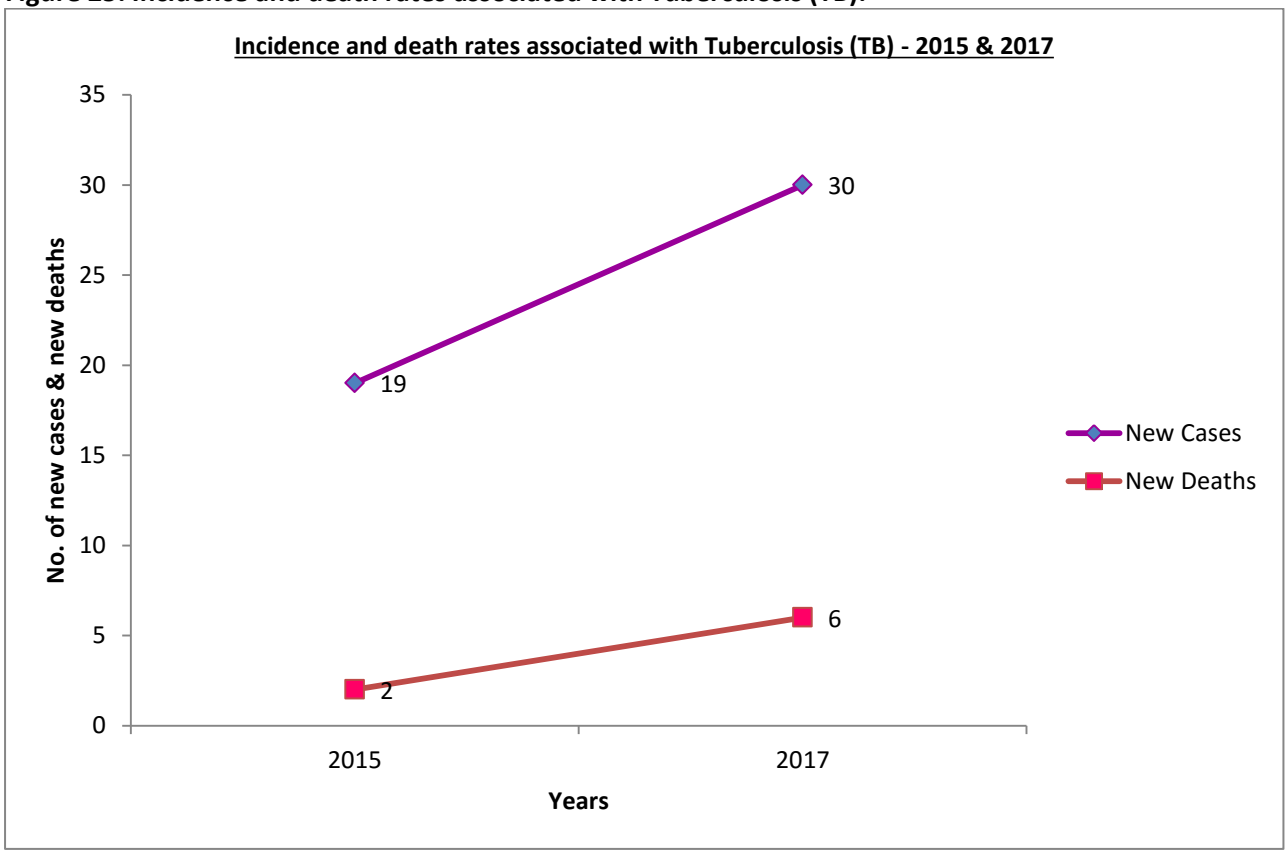
These diseases are monitored and reported routinely by the Disease surveillance team and the results are expected to change from time to time. As indicated by Figure 24, diarrhea cases have increased together with dengue fever at alarming rates. These are due to poor water and sanitation causing diarrhea. As for dengue, mosquitoes carry the virus from unclean and unhygienic surroundings and environments to people. Typhoid cases have decreased at a slow rate. To improve the health sector's response to these diseases, the Ministry of Health as the leading agency for the sector looked at ways to strengthen public health system and disease surveillance system in order to detect these diseases at the early stages before they becomes disease outbreaks. For instance, the Samoa Typhoid Control Program was commenced in September 2018 to assess typhoid status in Samoa and put control and prevention measures for this disease in place.

TB incidence and death rates associated with TB

Tuberculosis (TB) is an emerging public health disease that is gradually increasing in numbers. Direct Observed Treatment (DOTs) is administered to all who are tested positive with TB, but there are still issues / cases that cannot be followed up due to the movement/migration of patients from place to place, the patient is afraid of being stigmatized, and the lack of social support from relatives and others close to the patients. Deaths due to TB because of new infections are on the rise.

Human resource allocated to work at the Communicable Disease Clinic (CDC) at the National Health Services is another challenge to addressing these diseases. There needs to be more clinical staff to do contact tracing, administer DOTS effectively and efficiently, and to man the clinic from time to time. Having just one or two nurses to work at the CDC doesn't suffice the increasing demand for better services when the need arises.

Figure 25: Incidence and death rates associated with Tuberculosis (TB):

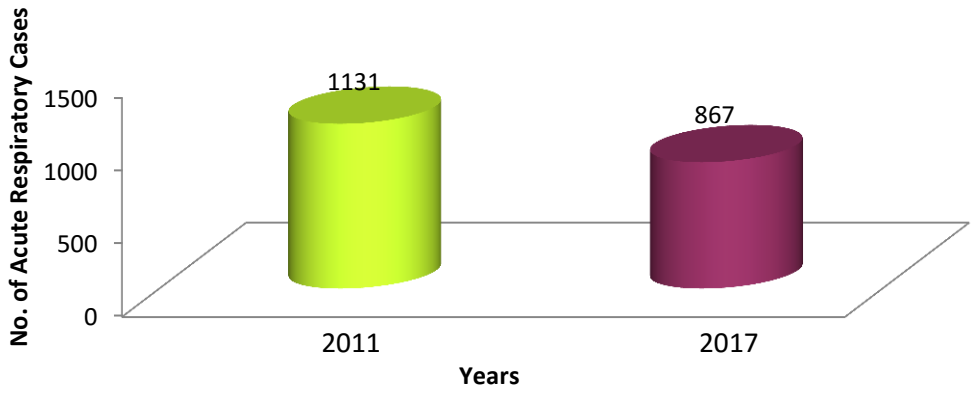


Source: Ministry of Health Monitoring Reports 2015 & 2017

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
TB incidence and death rates associated with TB	New cases: 19 Deaths: 2 (MOH 2015)	50% decrease	New cases: 30 Deaths: 6 (MOH 2017)	New cases = increased by 11 cases Deaths = increased by 4 cases	**Not Achieved**

Acute respiratory infections among children under 5 years

Figure 26: Acute respiratory infections among children under 5 years (2011 & 2017)



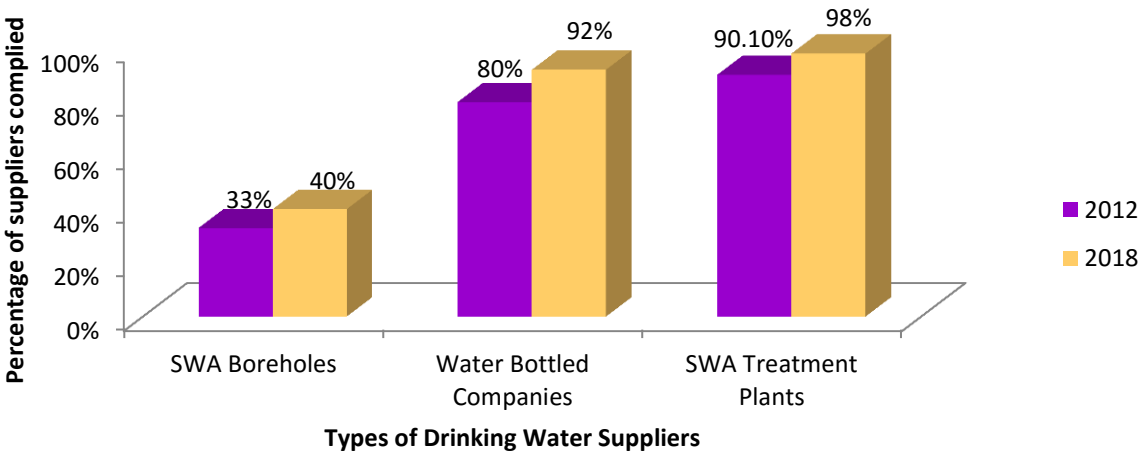
Source: NHS PATIS 2011 & 2017

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
Acute respiratory infections among children under 5 years.	1,131 (PATIS, 2011)	10% decrease	867 (PATIS, 2017)	23.3% decrease	**Achieved**

The acute respiratory infections among children under 5 years in Samoa was significantly high in 2011 as noted in Figure 26 above. In 2017, the number of children being infected had been reduced by 23.3% (867 cases). This reflects the great efforts by the health sector in strengthening infection controls through the implementation of the National Infection Control Policy 2011-2016 in all health facilities and promoting health programs and initiatives that promotes health and well-being of children through the implementation of the National Child and Adolescent Health Policy 2013 -2018.

Percentage of drinking water suppliers complying with National Drinking Water Standards

Figure 27: Percentage of drinking water suppliers complying with National Drinking Water Standards



Source: Ministry of Health Water Quality Monitoring Reports for 2012 & 2018

Indicators	Baseline	Target	Interim Measure	Progress To date	Status
% of drinking water suppliers complying with National Drinking Water Standards	SWA Boreholes: 33% Water bottled companies: 80% SWA Treatment Plants: 90.1% (MOH 2012)	Not defined	SWA Boreholes: 40% Water bottled companies: 92% SWA Treatment Plants: 98% (MOH 2018)	SWA Boreholes = 7% increase Bottled Water Companies = 12% increase SWA Treatment Plants = 6.9% increase	**Achieved**

The compliance of drinking water suppliers in Samoa with the National Drinking Water Standards have gradually improved since 2012 as depicted on Figure 27 above. This shows the evidence of effective implementation of monitoring and regulatory visits conducted by the Water Quality Unit of the Ministry of Health on six monthly basis to all drinking water sources, and improvement in community engagement and social mobilization through water testing with the Scientific Research Organization of Samoa (SROS) and community and stakeholder consultations and trainings.

Key Outcome 3 Overall Summary

Overall, the health sector managed to achieve 3 out of 5 (60%) of its indicators under Key Outcome 3 of the Health Sector Monitoring and Evaluation Operational Manual 2011. They are incidence of STIs, percentage of drinking water suppliers complying with National Drinking Water Standards, and acute respiratory infections among children under 5 years. The 2 out of 5 (40%) indicators that were not achieved include prevalence of STIs, prevalence of notifiable diseases and vaccine preventable diseases including water and food borne diseases and Incidence and death rates associated with tuberculosis (TB) and. The significant increase in prevalence of STIs and numbers of new TB cases and deaths, indicates that notifiable diseases needs to be addressed as one of the health sector priorities to be reflected in its next sector plan.

2.2.4 Key Outcome 4: Improved sexual and reproductive health

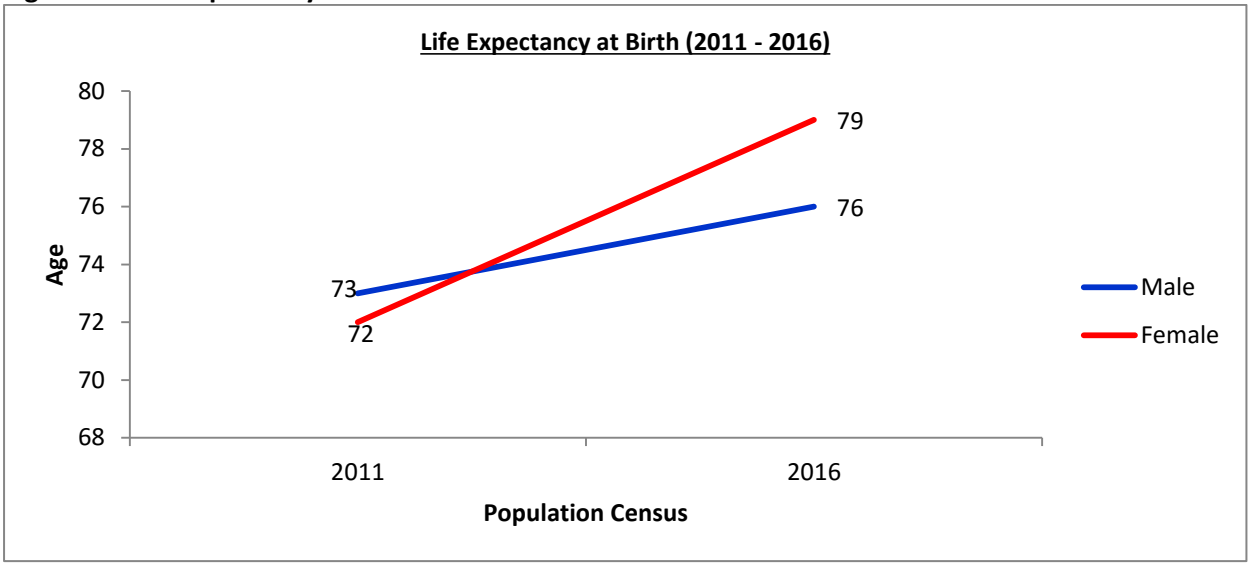
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Life Expectancy at birth	71.5 males 74.2 females (Census 2006)	80 years	Male: 76 years Female: 79 years (Census 2016)	Male = 0.9% increase Female = 4.8% increase	**Achieved**
Total Fertility Rate	4.2 children per woman (Census 2006)	4	3.9 children per woman (Census 2016)	Decrease of 0.3 children per woman	**Achieved**
Adolescent Birth rate per 1,000 women	28.6 per 1,000 women (Census 2006)	30 per 1,000 women	31per 1,000 women (Census 2016)	1 per 1,000 per women increase	**Achieved**
Contraceptive prevalence rate	29% (SDHS 2009)	Increase to 75 – 80%	27% (SDHS 2014)	2% decrease	**Partially achieved**

Life Expectancy at birth

Life expectancy at birth has been steadily increasing for both males and females over the last few years from 74.2 years in 2011 to 75 years in 2016[16]. Life expectancy is higher for females at 72 years in 2011 and 79 years in 2016, while males are at 73 and 76 years respectively.

[16]Samoa Bureau of Statistics. 2016. *Samoa Population Census 2011 & 2016.* Apia

Figure 28: Life Expectancy at birth



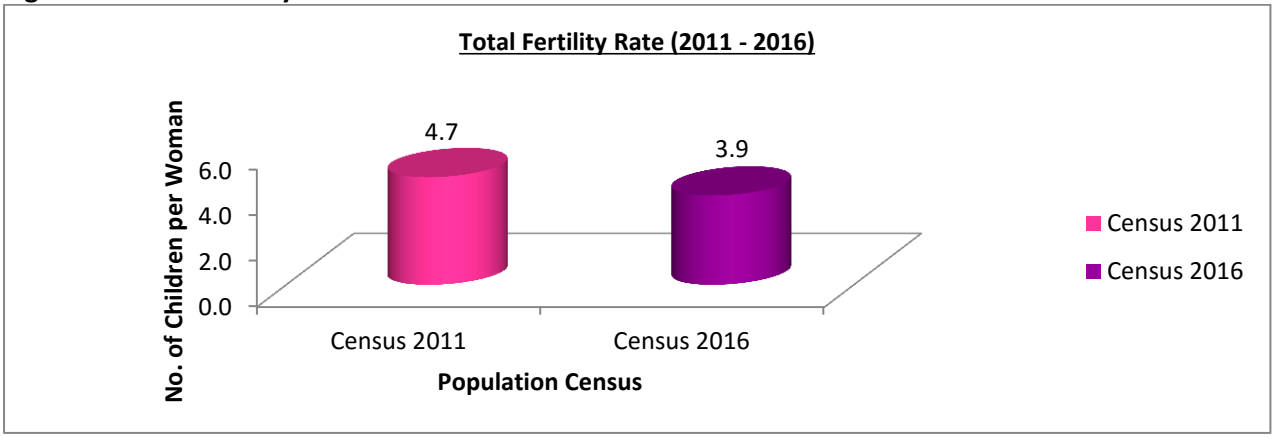
Source: Samoa Population and Housing Census Reports 2011 & 2016

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Life Expectancy at birth	71.5 males 74.2 females (Census 2006)	80 years	Male: 76 years Female: 79 years (Census 2016)	Male = 0.9% increase Female = 4.8% increase	**Achieved**

Life Expectancy at birth has been steadily increasing for both males and females in the past ten years. The Figure 28 above shows that the life expectancy for females is higher than males.

Total Fertility Rate

Figure 29: Total Fertility Rate



Source: Samoa Population and Housing Census Reports 2011 & 2016

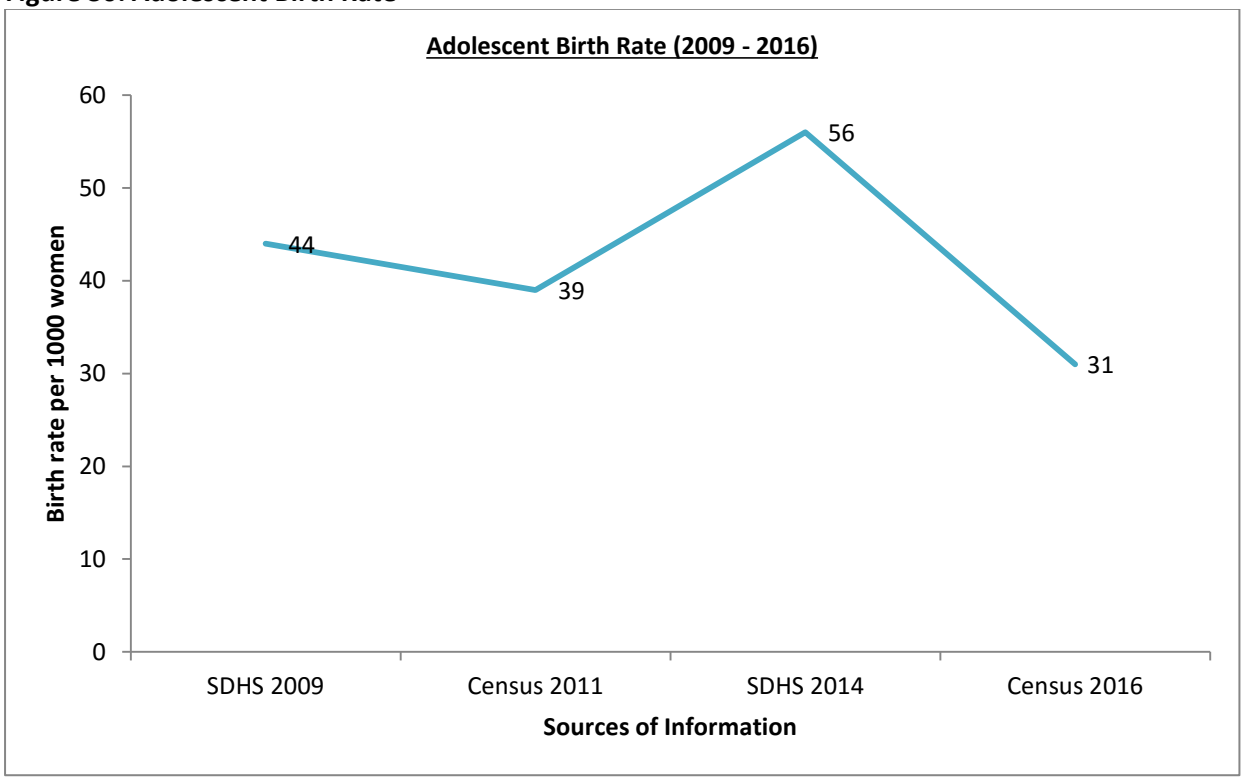
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Total Fertility Rate	4.2 children per woman (Census 2006)	4	Reduced by 0.5 per children (Census 2016)	Decrease of 0.3 children per woman	**Achieved**

The total fertility rate shown on Figure 29 indicates that the total number of children a woman would have by the end of her reproductive years has been reduced by 0.5 children per woman. The decline of the fertility rate is one of the most fundamental social changes that happened in human history. It is therefore especially surprising how very rapidly this transition can indeed happen. Therefore, the Total Fertility Rate has not shown significant change in the past five years.

Women's empowerment, the increasing well-being and status of children, technological and economic changes, changing norms, and opportunities for family planning are the matters for the reduction of the total fertility rate.

Adolescent Birth rate per 1,000 women

Figure 30: Adolescent Birth Rate



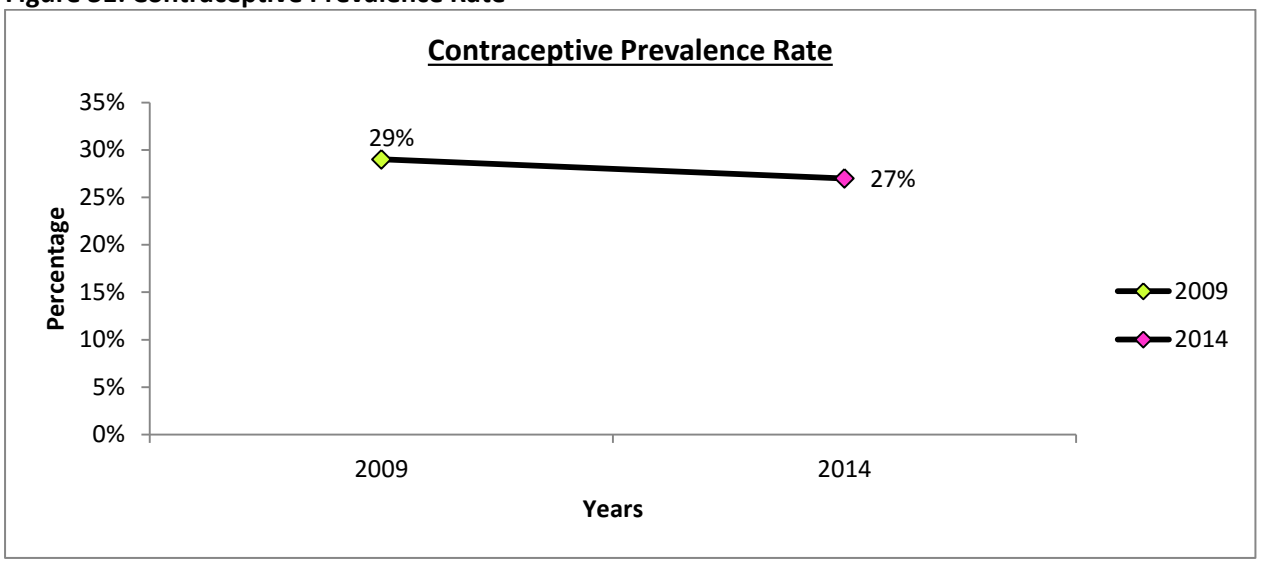
Source: Samoa Population and Housing Census Reports 2011 & 2016 and Samoa Demographic and Health Survey Reports 2009 & 2014

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Adolescent Birth rate per 1,000 women	44 per 1,000 women (SDHS 2009)	30 per 1,000 women	31per 1,000 women (Census 2016)	Fluctuated trend	**Achieved**

As depicted on Figure 30 above, there is fluctuation of adolescent birth rates for Samoa between 2009 and 2016. There was a slight decreased from 44 per 1,000 women in 2009 to 39 per 1,000 women in 2011, and then in 2014 it rapidly increased to 56 per 1,000 and in 2016, it dropped down to 31 per 1,000 women. The availability and youth friendly services within health facilities as well as other youth services provided by the Ministry of Women Community and Social Development, Young Women Christian Association, Teen Challenges, National Youth Council and other stakeholders, contributed to increase in awareness of young women of impacts of teenage pregnancy on their social and economic most importantly their health and well-being.

Contraceptive prevalence rate

Figure 31: Contraceptive Prevalence Rate



Source: Samoa Demographic and Health Survey Reports 2009 & 2014

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Contraceptive prevalence rate	29% (SDHS 2009)	Increase to 75 – 80%	27% (SDHS 2014)	2% decrease	**Partially Achieved**

The assessment on contraceptive prevalence found the majority of women prefer Depo-Provera for child spacing rather than oral pills. Jadelle and Implanon Implants are available but not very popular, due to lack of public awareness and knowledge on this new method. Since the implants method introduced to Samoa in 2016, only 4 health service delivery points reported the number (45) of women inserted their jadelle implant during this period. However, in 2017, there is an increase of 229 women who inserted their jadelle from all health service delivery points including the Samoa Family Health Clinic. Intra Uterine Contraceptive Device (IUCD) is not offered at other health facilities except SFHA, but recorded a very low usage as well.

There were 2 trainings conducted in 2016 and 2017 for nurse midwives on Long Acting Reversible Contraceptives (LARCS) – is an initiative of the Ministry of Health, funded under the UNFPA project. This calls for assistance from the SFHA since they are the only organization under the health sector that provides Jadelle, Implanon and IUCD services in Samoa to assist with the training on LARCS for health professionals.

The Family Planning Guideline was consulted in April 2018, and the draft was submitted for the executive management inputs and endorsement.

Key Outcome 4 Overall Summary

Similar to the outcome of the mid-term review of this plan, indicators for Sexual Reproductive Health had shown significant improvement in the past ten years. Achievements were noted for indicators on: life expectancy at birth; total fertility rate and adolescent birth rate per 1,000 women.

The only indicator under Key Outcome 4 that is partially achieved is ‘contraceptive prevalence rate”. This was due to low level of contraceptive use, despite their availability.

Despite these changes, the Ministry of Health in collaboration with the Samoa Family Health Association, the Ministry of Women, Community and Social Development, youth related non-governmental organizations such as Teen Challenge, National Youth Council and Young Women Christian Association (YWCA) to provide health advocacy programs targeting the sexual reproductive health of adolescents targeting young women and men. These are implemented as the Ministry of Health and health sector's commitment to the achievement of the SDG Target 3.7 in which to *ensure universal access to sexual and reproductive health care services*, including family planning, information and education and the integration of reproductive health into national strategies and programs.

A core component of the Adolescent Health Development (AHD) program is to strengthen, expand and up-scale Adolescent Sexual & Reproductive Health (ASRH) services for young people in Samoa and to increase training and develop infrastructure to make sexual and reproductive health services youth friendly. Listed below are some of the programs implemented during this period.

Adolescent Health / Contraceptive usage:

- Youth Friendly Spaces were established in the clinics, and sports and recreational equipment (such as volleyballs, ping pong sets) were procured to encourage young people to visit the centres;

- The SRH Section has also organised and coordinated training for health staff in the development and delivery of Youth Friendly Services (YFS) to promote young people accessing health services. The trainings were offered in both Upolu and Savaii from 2010 to 2016;

- The Youth Friendly Service Assessment was conducted to collect detailed information on the range and quality of services provided to adolescents and youths at District Hospitals in order to make services more youth friendly. The assessment process will determine what each facility needs for quality improvement of youth friendly service.

- The Sexual and Reproductive Health Awareness targeting young male employees from hotels, resorts and beach fales, and religious youths from different denominations, namely the Catholic Church, Congregational Christian Church in Samoa or EFKS and the Methodist Church was conducted in 2016 and 2017. These programs aimed to reduce the overall prevalence of STIs/HIV and AIDS; decrease maternal mortality rates; decrease teenage pregnancy and also to increase contraceptive prevalence rates across all age groups despite the increased in Adolescent Birth rate and maternal mortality rate.

- Monitor and evaluate RH commodities and Youth Friendly Services in all Health Service Delivery Points.

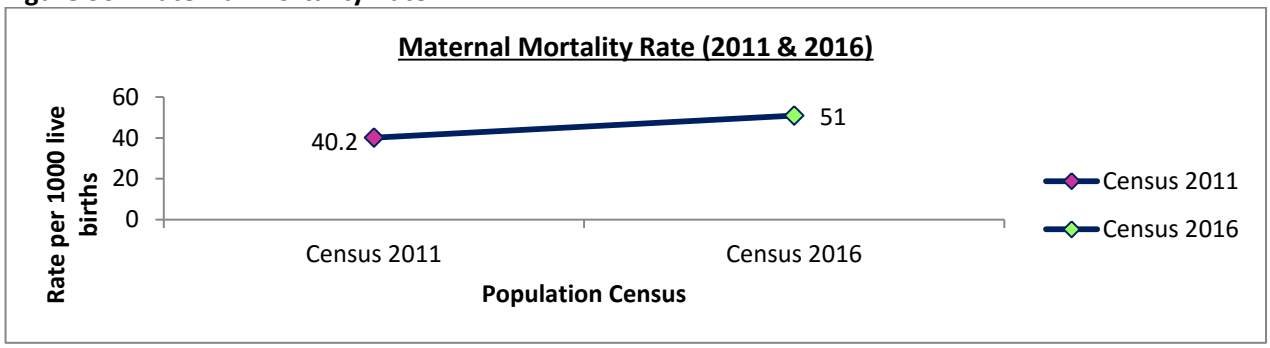
2.2.5 Key Outcome 5: Improved maternal and child health

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Maternal mortality rate	40.2 per 1,000 live births (Census 2011)	23 per 1,000 live births	51 per 1,000 live births (Census 2016)	10.8 per 1,000 live births	**Not achieved**
% of births attended by skilled health personnel	81% (SDHS 2009)	95% coverage	83% (SDHS 2014)	2% increase	**Not Achieved**
Infant mortality rate	15.6 per 1,000 live births (Census 2011)	10 (50% decrease)	18.6 per 1,000 live births (Census2016)	3% increase	**Not Achieved**
Under 5 mortality rate	20 per 100,000 live births (Census 2011)	12 (50% decrease)	19.25 per 100,000 live births	0.75% decrease	**Partially achieved**

			(Census 2016)		
% of infants exclusively breastfed for 6 months after birth	51% (SDHS 2009)	Increase to 90%	70% (SDHS 2014)	19% increase	**Partially Achieved**
Prevalence of cervical cancer in women aged 20 years and over	Number of patients admitted: 16 (MOH 2011)	Not defined	Number of patients admitted: 8 (MOH 2017)	8 no. of patients decreased	**Achieved**
Antenatal care coverage	92.7% (SDHS 2009)	Increase to 100%	93.3% (SDHS 2014)	0.6% increase	**Partially achieved**
Proportion of 1 year old children immunized against measles.	MMR1 = 55.7% MMR2 = 25.0% (SDHS 2009)	95% coverage	MMR1 = 76% MMR2 = 52% (SDHS 2014) MMR1 = 80% MMR2= 60% (NHS/EPI 2016)	MMR1 = 24.1% increase MMR2 = 35% increase	**Partially Achieved**
% of fully immunized children	25% (SDHS 2009)	Increase to 95%	53% (SDHS 2014)	28% increase	**Partially Achieved**

Maternal mortality rate

Figure 30: Maternal Mortality Rate



Source: Population Census Reports 2011 & 2016

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Maternal mortality rate	40.2 per 1,000 live births (Census 2011)	23 per 1,000 live births	51 per 1,000 live births (Census 2016)	Increased by 10.8 per 1,000 live births	**Not achieved**

Even though maternal mortality rate has increased, the Health Sector continues to work with its stakeholders and partners to improve maternal health.

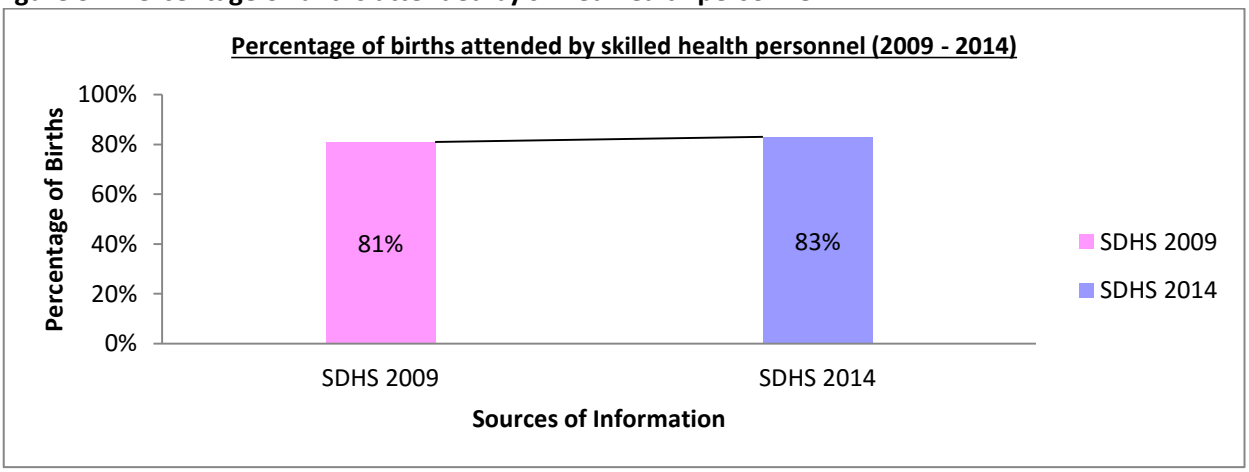
- The Health Service Performance Quality Assurance Division of the Ministry of Health conducted one (1) Midwifery Credentialing program in 2016 and one (1) in 2017. The Nursing Standards and Nursing Competencies were developed and launched in 2017.

- The Samoa Parliamentary Advocacy Group for Healthy Living consists of Parliamentarians and Chief Executive Officers with the purpose to assist in advocating and promoting health related activities including Sexual and Reproductive Health and other related health issues. The round table was held and the MOH emphasised the importance of the support of Political leaders in Sexual and Reproductive Health (SRH) issues, especially when the behaviour of young people or youths of Samoa are at risks.

- SRH Stakeholder Meetings are held quarterly to facilitate the monitoring of output and inform stakeholders on the progress of the Reproductive Health Program and how the ministry can support stakeholders in the implementation of their activities.

Percentage of births attended by skilled health personnel

Figure 31: Percentage of births attended by skilled health personnel



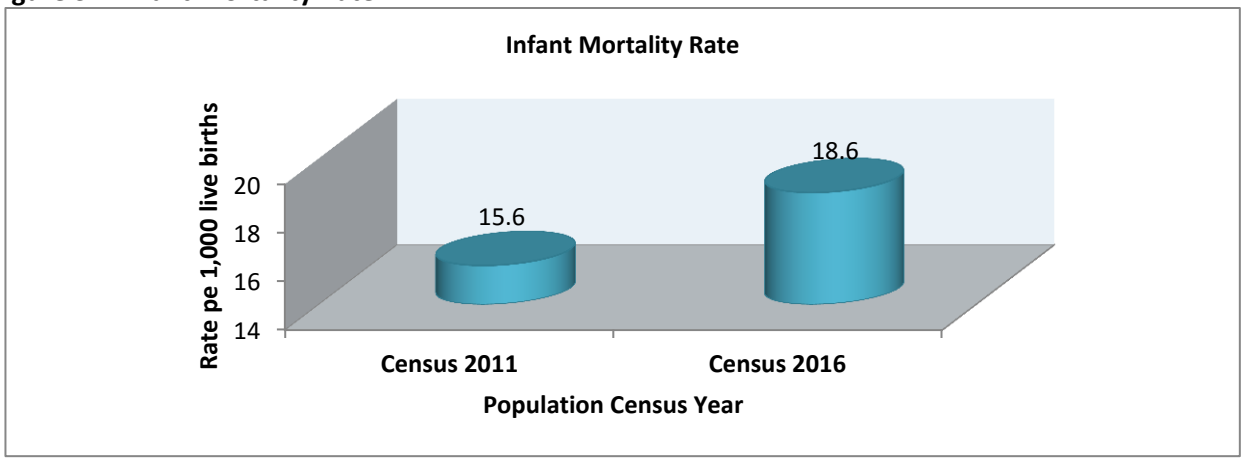
Source: Samoa Demographic & Health Surveys 2009 & 2014

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
% of births attended by skilled health personnel	81% (SDHS 2009)	95% coverage	83% (SDHS 2014)	2% increase	**Not Achieved**

The percentage of births attended by skilled health personnel is progressive as shown above. This indicates that the there is an improvement in building the capacity and developing of birth attendant's skills because of trainings and equipment provided for Traditional Birth Attendants to help manage pregnancy and childbirth as safely as possible and to recognize and refer complications. The Traditional Birth Attendants are registered under the MOH Nursing and Midwifery division and they continue to work in collaboration with community health nurses. The Traditional Birth Attendants Guideline 2nd edition was officially launched in 2018 as a monitoring tool to monitor the performance of traditional birth attendants.

Infant mortality rate

Figure 32: Infant Mortality Rate



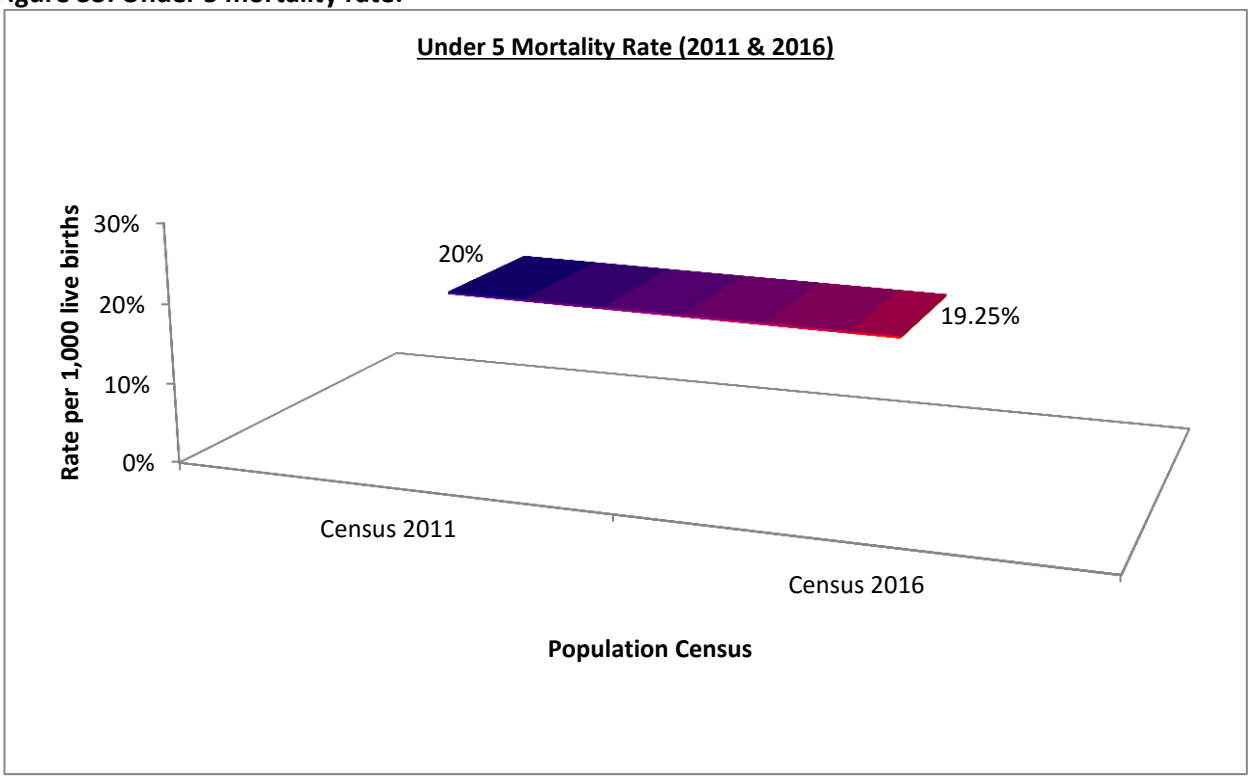
Source: Samoa Population Census 2011 & 2016

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Infant mortality rate	15.6 per 1,000 live births (Census 2011)	10 (50% decrease)	18.6 per 1,000 live births (Census2016)	3% increase	**Not Achieved**

Infant mortality rate for Samoa has increased by 3% as reported by the Population Census. The data is alarming and requires vigorous strategies and interventions so infant mortality rate decreases, as one death is one too many.

Under 5 mortality rate

Figure 33: Under 5 mortality rate:



Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Under 5 mortality rate	20 per 100,000 live births (Census 2011)	12 (50% decrease)	19.25 per 100,000 live births (Census 2016)	0.75% decrease	**Achieved**

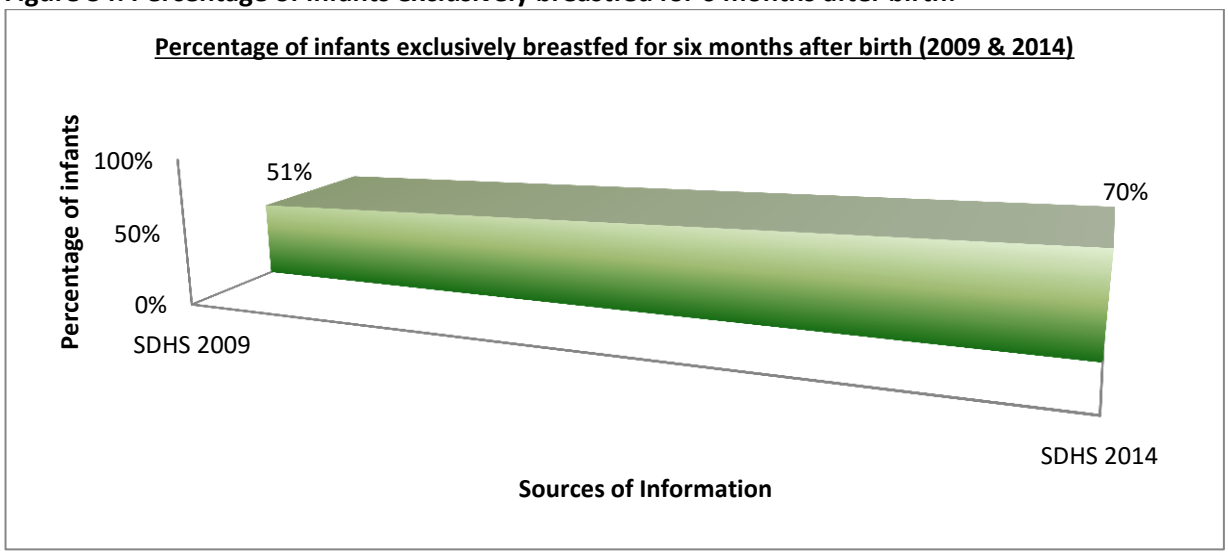
There is no significant change in the less than five mortality rate between 2011 and 2016. The decrease is 0.75%.

% of infants exclusively breastfed for 6 months after birth

Exclusive breastfeeding *(feeding baby only breast milk for the first 6 months of life)* and adequate complementary feeding *(starting to feed complementary foods from 6 months of life*) whilst continuing to breastfeed for 2 years or more are key interventions for improving child survival, potentially saving the lives of children under five.

To fully protect infant health, mothers are encouraged to exclusively breastfeed for the first 6 months of life, to introduce adequate and appropriate complementary food at 6 months, and to continue breastfeeding for 2 years and beyond.

Figure 34: Percentage of infants exclusively breastfed for 6 months after birth:



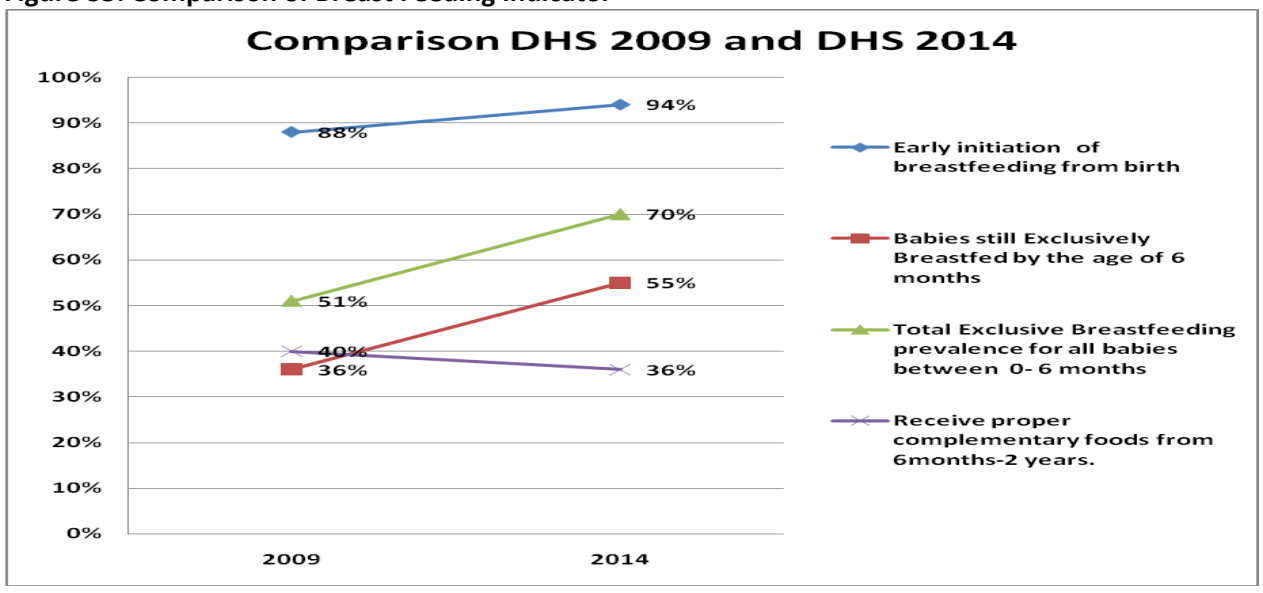
Source: Samoa Demographic and Health Surveys 2009 & 2014

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
% of infants exclusively breastfed for 6 months after birth	51% (SDHS 2009)	Increase to 90%	70% (SDHS 2014)	19% increase	**Partially Achieved**

In comparison to the Samoan Demographic Survey 2009 there has been improvement in breastfeeding practices. Total exclusive breastfeeding rates have increased from 51% in 2009 to 70% in 2014.

However there are still babies being fed solids before 6 months and 36% of babies are not receiving appropriate complementary foods from 6 months onwards as seen in Figure 35 below:

Figure 35: Comparison of Breast Feeding Indicator

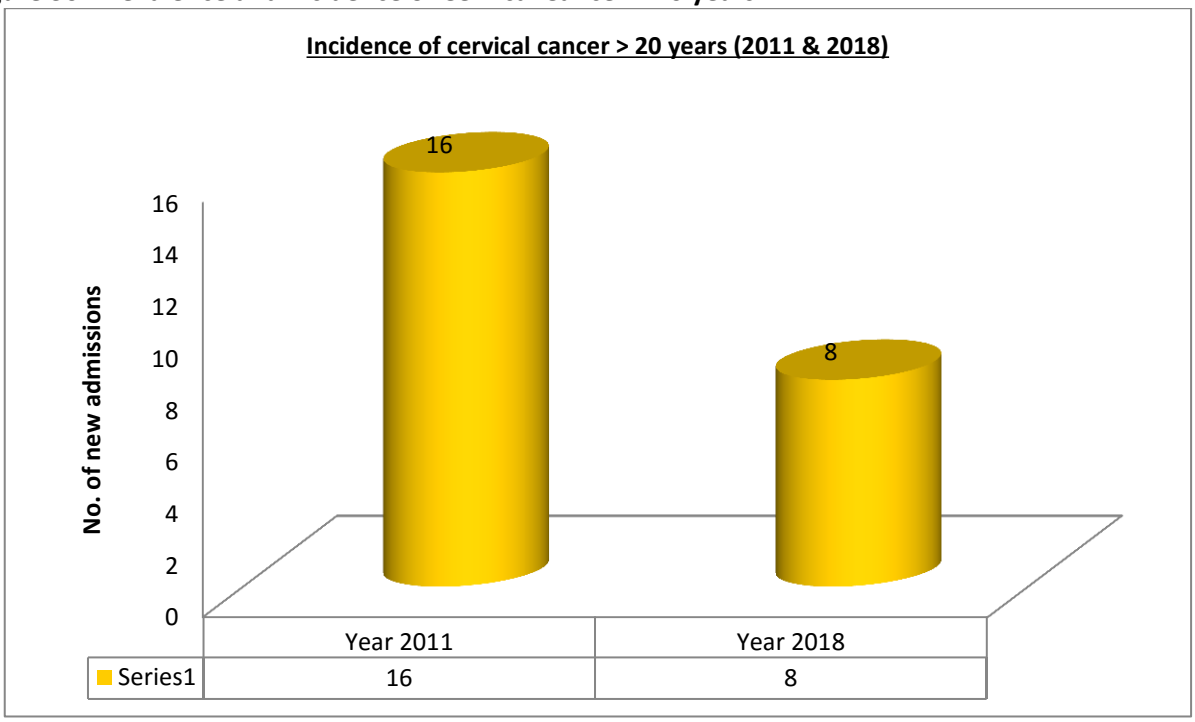


Thus in relation to these findings the Ministry of Health has raised awareness and campaign about the first 1000 days of a child's life and created media attention to help to alleviate the poor infant feeding practices as noted in the DHS. This encompasses from conception of the mother of her baby to the first 2 years of life good nutrition through proper care and nutrition of mother during conception up until baby is born , proper infant and young child feeding will help to counter the existence of malnutrition, anemia and other micronutrient deficiencies as reported in the Demographic Health Surveys.

Thus continuous work s conducted by the Health Sector and its partners to raise awareness and inform people about breastfeeding and infant and young child feeding (IYCF); which is a a key component of sustainable development; and implement a variety of actions at all levels on breastfeeding and IYCF in the new era of the SDGs **engage** and collaborate with a wider range of actors around promotion, protection and support of breastfeeding.

Prevalence of cervical cancer in women aged 20 years and over

Figure 36: Prevalence and incidence of Cervical Cancer > 20 years:



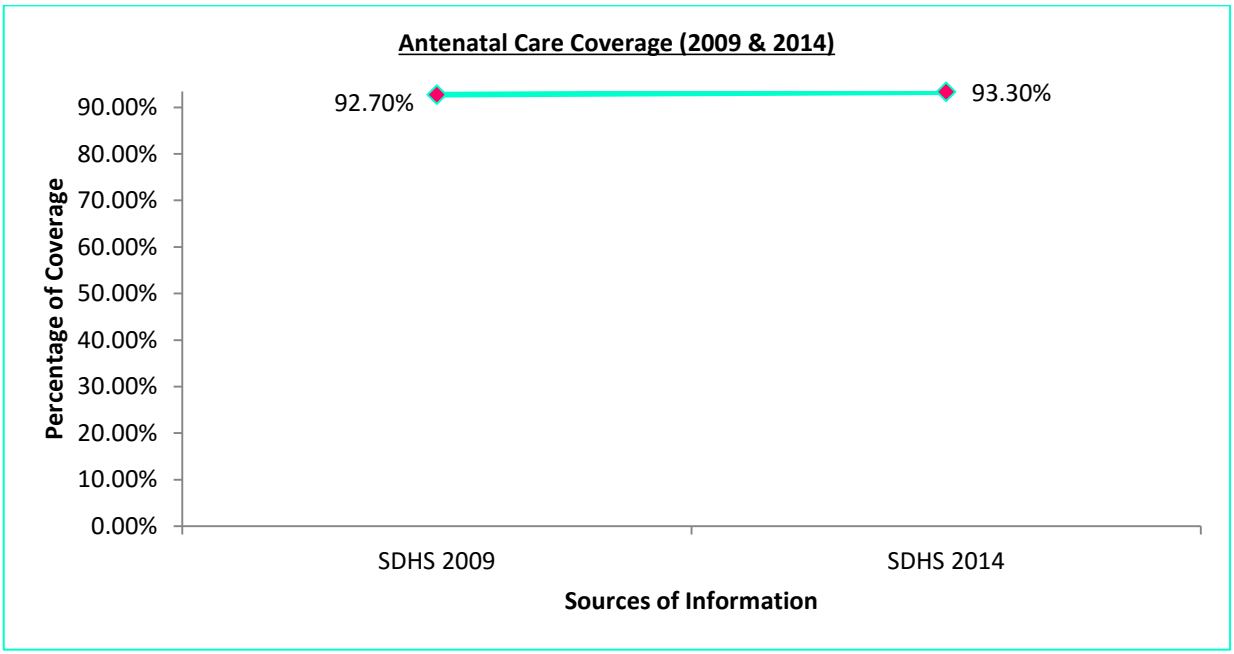
Source: Ministry of Health Annual Reports (2011 & 2017)

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Prevalence of cervical cancer in women aged 20 years and over	Number of patients admitted: 16 (MOH 2011)	Not defined	Number of patients admitted: 8 (MOH 2018)	8 no. of patients decreased	**Achieved**

Cervical cancer is declining as can be noted in Figure 25. From 2011, there were 16 cervical cancer cases. In 2018, it has dropped to 8 cases.

Antenatal care coverage

Figure 37: Antenatal Care Coverage



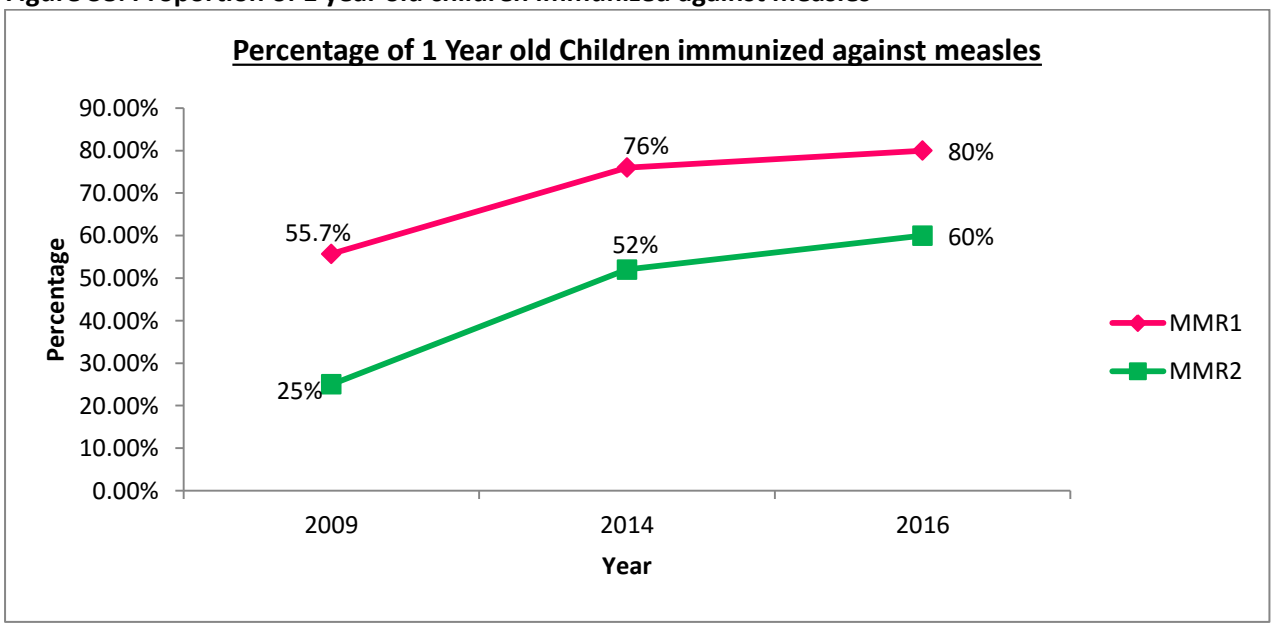
Source: Samoa Demographic & Health Surveys 2009 & 2014

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Antenatal care coverage	92.7% (SDHS 2009)	Increase to 100%	93.3% (SDHS 2014)	0.6% increase	**Partially achieved**

Although there is a slight increase of antenatal care coverage, but the improvement of health service provision for antenatal care has remarkably improved. These include ongoing antenatal services and mobile ultrasound scan conducted in rural health facilities for antenatal mothers residing in rural areas.

Proportion of 1 year old children immunized against measles

Figure 38: Proportion of 1 year old children immunized against measles



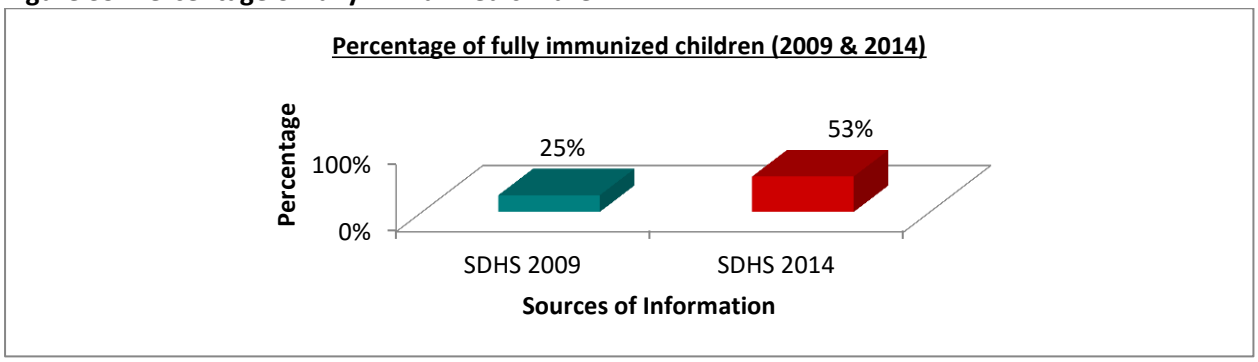
Source: Samoa Demographic & Health Survey 2009 & 2014 and NHS EPI 2016

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
Proportion of 1 year old children immunized against measles.	MMR1 = 55.7% MMR2 = 25.0% (SDHS 2009)	95% coverage	MMR1 = 76% MMR2 = 52% (SDHS 2014) MMR1 = 80% MMR2= 60% (NHS/EPI 2016)	MMR1 = 24.1% increase MMR2 = 35% increase	**Partially Achieved**

Immunization is always a challenge as parents do not complete children's immunization programme. Both vaccines are administered when the child reaches 1 year old. Both vaccines although have increased in the number of children immunized, it has not reached the required percentage to assure children are safe from measles, mumps and rubella.

% of fully immunized children

Figure 39: Percentage of fully immunized children



Source: Samoa Demographic & Health Surveys 2009 & 2014

Indicators	Baseline	Target	Medium Term	Progress to Date	Status
% of fully immunized children	25% (SDHS 2009)	Increase to 95%	53% (SDHS 2014)	28% increase	**Partially Achieved**

As noted in the above Figure 39, the percentage of children immunized has improved but it is way below the required percentage of 95% to ensure that all children are immunized against childhood diseases. The SDHS of 2009 reported a lowest of 25% of fully immunize children. Five (5) years later in 2014 the increase was 28%.

Key Outcome 5 Overall Summary

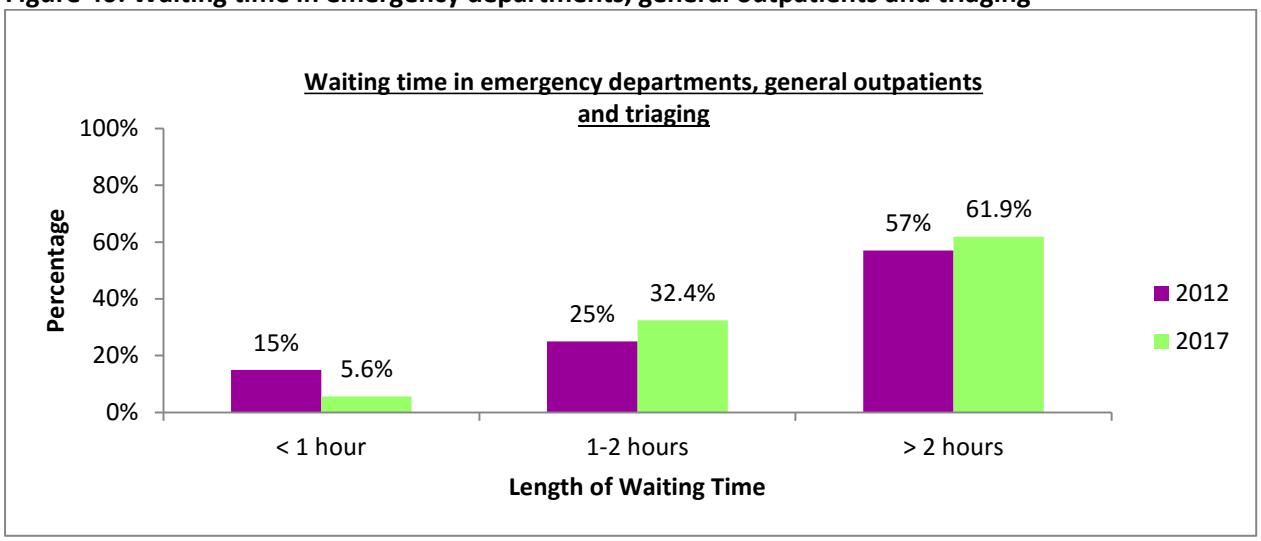
There is only one indicator under Key Outcome 5 that has been achieved i.e. prevalence of cervical cancer in women aged 20 years and over. As highlighted in Figure 36 above, the number of cervical cancer cases has been decreased by 8. This reflects the effort by the Samoa Cancer Society, Ministry of Health, National Health Service and other health sector partners through multi-sectoral approach in providing health awareness and promotion services to inform young mothers of signs and symptoms of cervical cancer, and encourage them to do cervical screening to detect positive cases as early as possible. The five indicators that are partially achieved under this Key Outcome relate to infants and maternal health including immunization of children and pregnant mothers access to antenatal care. There is a need for the health sector to review interventions particular for these population groups, identify gaps and make improvements. The remaining three indicators that are not achieved are to do with maternal and infant mortality and births attended by skilled health professionals. This indicates that the health sector needs to improve services for maternal and child health in order to reverse the significant increase on maternal and infant mortality rates.

2.2.6 Key Outcome 6: Improved health systems, governance and administration

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Waiting time for emergencies, triaging and general outpatients	<1 hour = 15% 1-2 hours = 25% > 2 hours = 57% **(MOH QA Report 2012)**	Emergency – within 5 mins. Triaging – within 20-30 mins.	<1 hour = 5.6% 1-2 hours = 32.4% > 2 hours = 61.9% **(MOH QA Report 2017)**	<1 hr = reduced by 9.4% 1-2 hrs = increased by 7.4% >2 hrs = increased by 4.9%	**Partially achieved**
Health facilities and providers are accredited and certified	Doctors = 89 Dentists = 13 Pharmacists = 9 R/Nurses = 135 E/Nurses = 71 Midwives = 37 **(MOH 2011)**	100% of all health practitioners are registered and licensed 100% of health facilities are accredited by 2018	Doctors = 108 Dentists =17 Pharmacists =13 R/Nurses = 274 E/Nurses =90 Midwives = 79 **(MOH 2018)**	Doctors = increased by 9 Dentists = increased by 4 Pharmacists = increased by 4 R/Nurses = increased by 139 E/Nurses = increased by 42	**Achieved**
Health facilities compliance with legislations, policies, protocols and standards	NIL	100%	Average of 70% compliance (MOH 2018)	Increased by 70%	**Partially achieved**
Health facilities service & utilization rate	n/a	Not defined	70% average – health utilization rate (MOH 2018)	70% health facility utilization rate	**Achieved**
Proportion of clients satisfied with health services.	30% (2009/2010)	95%	58% (MOH Clinical Audit Report 2012)	No progress reported.	**Not Achieved**
Health facilities service & utilization rate	n/a	Not defined	70% average – health utilization rate (MOH 2018)	70% health facility utilization rate	**Achieved**
% of Health personnel aged 55 years and over	5% **(Samoa HRH Profile 2011)**	Not defined	-	No information available	**Not achieved**
Ratio per 100,000 population: - **doctors** - **dentists** - **nurses** - **pharmacists** - **midwives**	Doctors = 4.74 Dentists = 0.69 Pharmacists = 0.48 R/Nurses = 7.47 E/Nurses = 3.93 Midwives = 2.05 **(MOH, 2011)**	Not defined for all professionals	Doctors: 5 Dentists: 1 Pharmacists: 1 Nurses: 11 Midwives: 4 Enrolled Nurse: 4 (MOH 2017)	Increased by: Doctors = 0.26 Dentists = 0.31 Pharmacists = 0.52 R/Nurses = 3.53 E/Nurses = 0.07 Midwives = 1.95	**Achieved**
Total health expenditure as a percentage of GDP	5% (WHO, 2006)	Not defined	8.27% (NHA FY14/15) 7% (WHO, 2011)	2015 – 3.27% increase 2011 – 2% increase	**Achieved**
Government Expenditure on health	19% (WHO, 2006)	Not defined	17% (NHA 2014-15) 25% (WHO, 2011)	2015 – 2% decrease 2011 – 8% increase	**Not achieved**

Waiting time in emergency departments, general outpatients and triaging

Figure 40: Waiting time in emergency departments, general outpatients and triaging



Source: MOH 2017

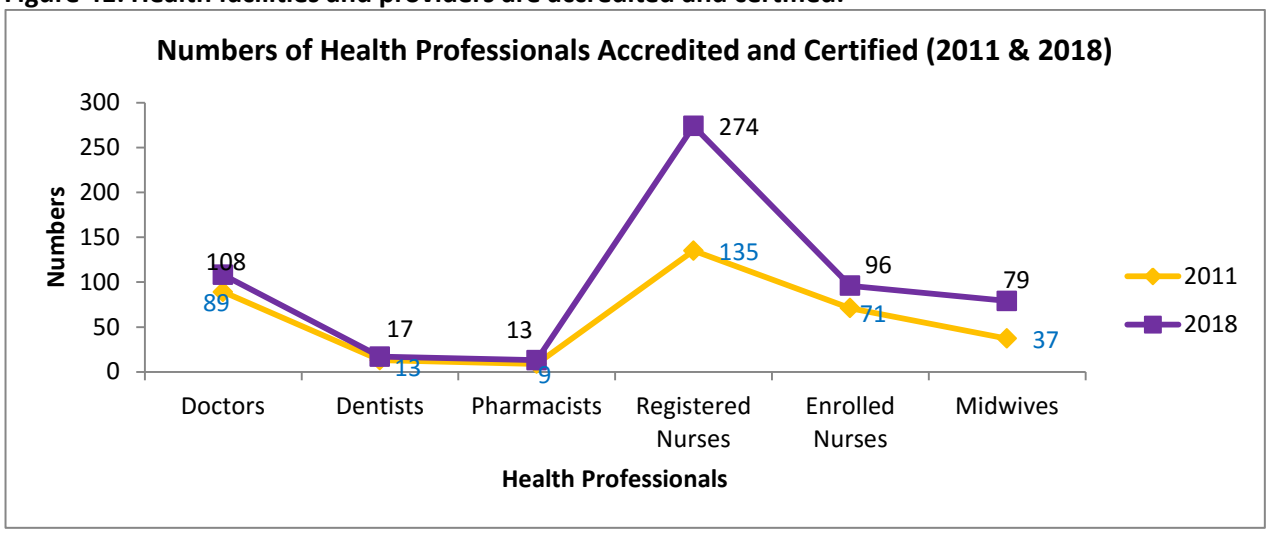
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Waiting time in emergency departments, general outpatients and triaging	<1 hour = 15% 1-2 hours = 25% > 2 hours = 57% **(MOH QA Report 2012)**	Emergency – within 5 mins. Triaging – within 20-30 mins.	<1 hour = 5.6% 1-2 hours = 32.4% > 2 hours = 61.9% **(MOH QA Report 2017)**	<1 hr = reduced by 9.4% 1-2 hrs = increased by 7.4% >2 hrs = increased by 4.9%	**Partially achieved**

Waiting time at the emergency, outpatient and triaging needs to improve. 15% of patients had to wait for 1 hour or less to be seen by a Doctor. This percent improved in 2017. 25% of the people surveyed in 2012 had to wait between 1and 2 hours to be seen by a doctor. This percentage increased 5 years later to 32.4% - an increase of 7.4%. 57% of patients had to wait for 2 or more hours to be seen by a doctor. This percentage increased 5 years later to 61.9% - an increase of 4.9%. The long hours of waiting time to see a doctor is an issue that needs to be revisited with the number of health professions required to provide the service for the people. There also needs to be a better strategy to ensure patients do not have to wait long to see a Doctor.

Health facilities and providers are accredited and certified

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Health facilities and providers are accredited and certified	Doctors = 89 Dentists = 13 Pharmacists = 9 R/Nurses = 135 E/Nurses = 71 Midwives = 37 **(MOH 2011)**	100% of all health practitioners are registered and licensed 100% of health facilities are accredited by 2018	Doctors = 108 Dentists =17 Pharmacists =13 R/Nurses = 274 E/Nurses =90 Midwives = 79 **(MOH 2018)**	Health Professionals with APCs are increased by: Doctors = 9 Dentists = 4 Pharmacists = 4 R/Nurses = 139 E/Nurses = 42	**Achieved**

Figure 41: Health facilities and providers are accredited and certified:



Source: MOH Registration of Health Professionals (2011 & 2018)

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Health facilities and providers are accredited and certified	Doctors = 89 Dentists = 13 Pharmacists = 9 R/Nurses = 135 E/Nurses = 71 Midwives = 37 **(MOH 2011)**	100% of all health practitioners are registered and licensed 100% of health facilities are accredited by 2018	Doctors = 108 Dentists =17 Pharmacists =13 R/Nurses = 274 E/Nurses =90 Midwives = 79 **(MOH 2018)**	Doctors = increased by 9 Dentists = increased by 4 Pharmacists = increased by 4 R/Nurses = increased by 139 E/Nurses = increased by 42	**Achieved**

At the moment, the documents to track the progress of health facilities accreditation and certification are not in place. Thus they need to be developed and implemented before we measure the compliance. The healthcare providers are accredited and certified on annual basis. Based on healthcare professional registration, the numbers of healthcare professionals being accredited and certified has increased from 2015 to 2017 as shown on the graph above.

Proportion of clients satisfied with health services

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Proportion of clients satisfied with health services.	30% (2009/2010)	95%	58% (MOH Clinical Audit Report 2012)	No progress reported.	**Not Achieved**

The overall client satisfaction rate with health services was only monitored in 2012 and this was specifically for the Pharmacy area. There was no follow up undertaken to track the progress of this indicator.

Health facilities services and utilization rate:

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Health facilities service & utilization rate	n/a	Not defined	70% average – health utilization rate (MOH 2018)	70% health facility utilization rate	**Achieved**

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Health facilities service & utilization rate	n/a	Not defined	70% average (MOH 2018)		**Not achieved**

There has not any data reported on this indicator in the past ten years. The 70% average of health facilities service and utilization rate was just released from the very recent health facilities assessment conducted under the request of the World Bank for its Health Project. Thus, it has to admit that this indicator is not within the health sector's ability to track. Service utilization does not measure the work of the Ministry of Health and the health sector. Prevention keeps people away from service visits.

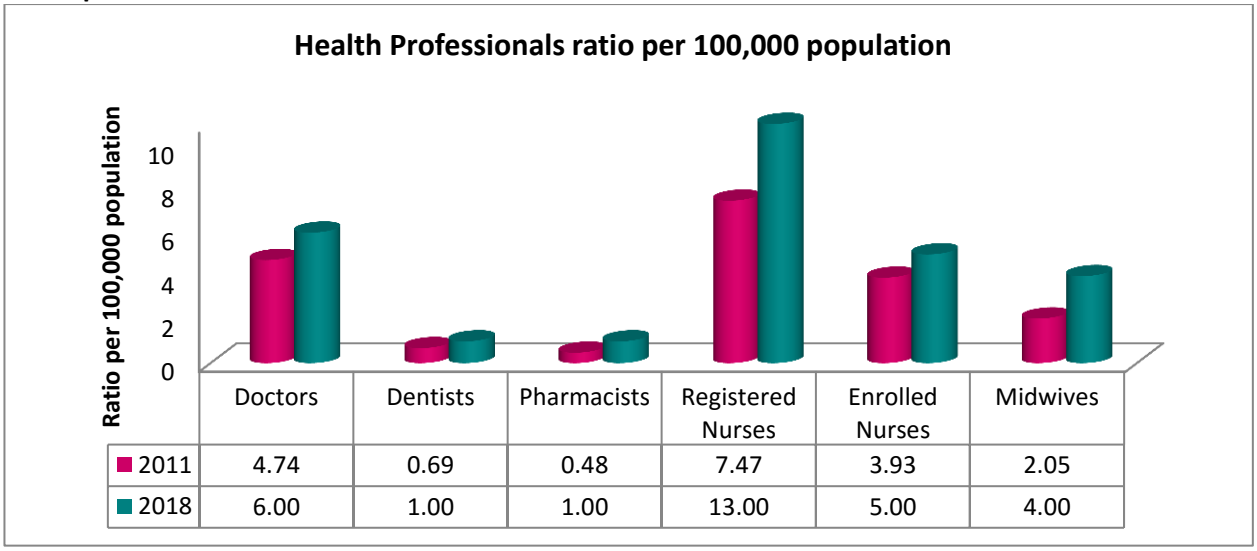
Percentage of health personnel aged 55 years and over

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
% of Health personnel aged 55 years and over	5% **(Samoa HRH Profile 2011)**	Not defined	No information available	No progress	**Not achieved**

Similar to other indicators mentioned above, there are no interventions in place for this and it does not reflect the sector priorities.

Ratio per 100,000 populations: physician; dentists; nurses; pharmacists; midwives; AHP

Figure 42: Ratio per 100,000 population of physician, dentists, nurses, pharmacists, midwives and allied health professionals



Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Ratio per 100,000 population: - **doctors** - **dentists** - **nurses** - **pharmacists** - **midwives**	Doctors = 4.74 Dentists = 0.69 Pharmacists = 0.48 R/Nurses = 7.47 E/Nurses = 3.93 Midwives = 2.05 **(MOH, 2011)**	Not defined for all professionals	Doctors: 5 Dentists: 1 Pharmacists: 1 Nurses: 11 Midwives: 4 Enrolled Nurse: 4 (MOH 2018)	Increased by: Doctors = 0.26 Dentists = 0.31 Pharmacists = 0.52 R/Nurses = 3.53 E/Nurses = 0.07 Midwives = 1.95	**Achieved**

The ability of a country to meet the health demands of its population depends largely on the sufficient supplies of health professionals with the knowledge, sills, motivation and competencies to provide the health services. However, the prolonged challenge faced by Samoa's health system in terms of insufficient supplies of health workers, remains one of the health sector's priorities at the moment. This

is clearly stated on Figure 42 above, which indicates that there is a dire need to increase the numbers of doctors, dentists, pharmacists and midwives in Samoa's healthcare workforce.

Even though the healthcare workforce distribution across the country is uneven because of the shortages of staff, the Ministry of Health as the leading agency of the sector in collaboration with the government of Samoa, development partners and service providers developed and implemented programs that would boost the morale of local health professionals to work for the country instead of moving overseas. These include:

(i) the development, implementation, monitoring and review of the Human Resources for Health Policy and Strategy 2008,
(ii) enhancing the capacity and competencies of health professionals through health targeted scholarship programs under the Samoa Government Scholarship Scheme, World Health Organization Fellowship Program and Pacific Open Learning Health Network (POLHN), local and overseas trainings and workshops, and
(iii) organizing health sector career talk programs targeting students who are in their final year in public, private and church colleges to take health studies in the National University of Samoa Faculties of Nursing, Medicine and Health Science, in order to get a career in health in the future.

Total Health Expenditure as a percentage of GDP:

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Total health expenditure as a percentage of GDP	5% (WHO, 2006)	Not defined	8.27% (NHA FY14/15) 7% (WHO, 2011)	2015 – 3.27% increase 2011 – 2% increase	**Achieved**

Total health expenditure increased over the years. As compared to the baseline year, total health expenditure has been on a steady increase.

Government Expenditure on Health:

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Government Expenditure on health	19% (WHO, 2006)	Not defined	17% (NHA 2014-15) 25% (WHO, 2011)	2015 – 2% decrease 2011 – 8% increase	**Not achieved**

The Government Expenditure on health increased between the 2006 and 2011, and decreasing again in the financial year 2014/15.

Key Outcome 6 Overall Summary

Since 2008, Samoa's health sector was able to improve some areas under Key Outcome 6. These include its concerted effort to address the health workforce issues that had been faced by the sector for some time. This results to the increase in numbers of some health professionals as highlighted above, and the introduction of the new cadres. In addition, there is a recognition of the health sector's ability to enhance the provision of health services include healthcare, health prevention and health promotion and primordial services. It also indicates the great effort by the government of Samoa through its close partnership with health development partners, in improving health facilities and services through health infrastructural development made during the lifetime of the Health Sector Plan 2008-2018.

Similar to the outcome of the mid-term review, the availability of information required for evaluating the indicators for services standards is somewhat limited. Comparative data are needed to measure client

satisfaction with the health services as well as the health services and facilities utilization rates. Thus, it appears that there are no proper monitoring mechanisms in place to track the progress of these indicators.

The trend of total health expenditure within the 10 years of the current sector plan indicates that what the health sector spent on providing health services is significantly high. The most expensive health service provided is the curative care including the overseas referral of patients for medical treatment. Since the government allocation for health is gradually decreasing, the health sector needs to focus on prioritization of its services and programs for its next sector plan, and spend accordingly.

2.2.7 Key Outcome 7: Improved risk management and response to disasters, emergencies and climate change

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
% of health organizations with disaster and emergency and climate change response plans developed and reviewed in the last 5 years.	4 (MoH, NHS, MKFS, Samoa Red Cross)	Not defined	4 health organizations with Disaster and Emergency Response plans include: (i) MOH (ii) NHS (iii) NKFS (iv) Samoa Red Cross Society	67% of Health Organizations have disaster and emergency response plans	**Achieved**
% of water service providers with water safety plans developed or reviewed in the last 5 years	80% treated supplies 33 independent scheme untreated 37 bore holes untreated	100%	4 Water Safety plans for independent water schemes being and implemented. 4 water safety plans for Samoa Water Authority being drafted.	4 water safety plans developed & 4 water safety plans being drafted	**Achieved**
% of household in the disaster zone with good sanitation 1 year post disaster.	n/a	At least 95%	-	No available information	**Not Achieved**
% of registered skilled health professionals with competencies to respond to emergencies and disasters.	n/a	Increase by 50%	100%	Health professionals were trained during disaster and emergency disaster drills for the tsunami in 2009 & Cyclone Evans in 2012 and disease outbreak drills conducted by the sector for H1N1 in 2009 & Ebola in 2015.	**Achieved**

The commitment shown above by the health to implement indicators under Key Outcome 7 pertaining to risk management and response to disasters, emergencies and climate change, reflects a cross sectoral collaboration as well as responsible health agencies. So far, the Ministry of Health, National Health Service, National Kidney Foundation and the Samoa Red Cross Society have already developed related

disaster and emergency and climate change plans. However, given the latest review of the National Disaster Management Plan 2019 – 2022 and the recent development of the DRM Strategy for the Health Sector, all agencies' plans need to be updated and revised to ensure that functions and responsibilities are in line with these national disaster and climate change frameworks.

% of health organizations with disaster and emergency and climate change response plans developed and reviewed in the last 5 years.

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
% of health organizations with disaster and emergency and climate change response plans developed and reviewed in the last 5 years.	4 (MoH, NHS, NKFS, Samoa Red Cross)	Not defined	4 health organizations with Disaster and Emergency Response plans include: (v) MOH (vi) NHS (vii) NKFS (viii) Samoa Red Cross Society	67% of Health Organizations have disaster and emergency response plans	**Achieved**

There has been tremendous work by health agencies such as Samoa Red Cross and Samoa Family Health Association in building awareness and facilitating DRM and climate resilience activities. These activities are in line with NHS DRM Response Plans in place. These include building capacity for health staff through simulation exercises, drills and ongoing trainings for health staff including healthcare professionals in preparation for disasters and emergencies. Furthermore, trainings and staff capacity building activities as part of the capacity building component of CASH has been supported and facilitated mainly by MNRE, DMO Office in the last two years.

The CASH aims to strengthen the capacity of health sector to improve risk management and response to disasters, emergencies and climate change. It also ensures that health concerns are addressed in decisions in other sectors to reduce risks from climate change and more importantly increase public awareness of the health risks of climate change. Because climate change related research is growing, therefore the strategy needs to be updated where necessary to ensure it is in line with new information and understanding about health and climate change emerging issues.

In 2017, the Climate Change and Health Volunteer assisted the Climate Change and Health Unit for six months to review the 2014 CASH. At this stage, a thorough literature review has been conducted on national, regional and international climate change and health frameworks. This aims to guide the updated CASH framework in order to ensure that national activities are synergized and in line with regional and international health and climate change obligations. It is anticipated that this framework will help guide updated CASH that will start its consultative process in 2019.

On the other hand, the DRM Strategy for the Health Sector was recently launched in 2018. It includes mitigation to lessen or limit the adverse impacts of hazards and related disasters. The strategy emphasizes on preparedness, along with knowledge and capacities to effectively anticipate, respond to, and recover from the impacts of likely, imminent or current hazard events or conditions. Furthermore, the DRM Strategy aims to build DRM capacities across the sector and address gaps. The Strategy provides MoH, all service providers and stakeholders across the Health Sector with a summary of initial actions and recommendations to build the resilience health systems at the national level.

The initial consultative process in 2016 identified gaps to inform the development of the DRM Strategy. Identified gaps were identified by health staff which reflected their experiences of 2009 tsunami and

2012 cyclone Evans. The gaps identified mainly focused on better preparedness and development of national and community health emergency and disaster risk management systems. One of the major gaps identified in the DRM strategy is the absence of a standardized process to link risks to decision making processes always increase community vulnerability. Hence, there is a need to develop a standardized process that will improve and strengthen community resilience, faster response and recovery from disasters with less reliance on overseas assistance. In addition, psychological health has been noted as one of the large service gaps by the Health Sector. Another major gap identified in the DRM Strategy is the need to mainstream International Health Regulations (IHR) requirements for health emergencies and emerging diseases.

In November 2016 the Ministry of Health and Disaster Management Office (DMO), of the Ministry of Natural Resources and Environment (MNRE) undertook inspections of all the main hospitals, Rural district hospitals (RDH) and Health centres in both Upolu and Savai'i: MalietoaTanumafili II, Tuasivi, Tupua Tamasese Meaole, Apia, Foailalo RDH, Sataua RDH, Safotu RDH, Lalomanu RDH, Poutasi RDH, Leulumoega RDH, Lufilufi Health Centre, Faleolo Medical Centre ad Sa'anapu Health Centre.

In addition to these, the National Kidney Foundation building (Apia), and the Pharmaceutical Warehouse were also visited. The hospitals were being reviewed in terms of their disaster risk resilience. The following categories were assessed:

- Structure
- Proximately to Hazard Zones
- Hospital Accessibility
- Backup Power and Water
- Communication
- Contaminated Waste Procedures
- Fire Safety
- General site tidiness
- Safety procedures in place for disasters

The Table 15 below summarizes the rankings and a list of recommendations is given below. A detailed report of all the hospitals and health centres illustrate the above categories to be in satisfactory or good standard, poor or very poor.

Figure 43: Categories of Hospitals and Health Centre Facilities

		Structure	Proximity to Hazard Zones	Hospital Accessibility	Backup Power & water	Communication	Contaminated waste procedures	Fire safety	General site tidiness	Safety procedures in place for disasters
Main	TupuaTamaseseMeaole, Apia	Good/ Satisfactory	Good	Good	Good	Good	No Information available	Poor*	Good	No detailed information available
	MalietoaTanumafili II (Tuasivi)	Good/V.Poor	Poor	Poor?	No Information available	Good	No Information available		Poor	
Upolu	Lalomanu RDH	Satisfactory	Good	Satisfactory	Poor	Satisfactory	Satisfactory		Satisfactory	
	Leulumoega RDH	Poor	Poor	Satisfactory	Poor	Satisfactory	Poor		Satisfactory	
	Poutasi RDH	Satisfactory	Very Poor?	Satisfactory	Poor	Satisfactory	Satisfactory		Satisfactory	
Upolu	Faleolo Medical Cent.	Good	Good	Satisfactory	Satisfactory	Poor	Satisfactory		Good	
	Lufilufi Health Cent.	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory		Satisfactory	
	Saanapu Health Cent.	Satisfactory	Good	Satisfactory	Poor	Satisfactory	Satisfactory		Satisfactory	
Savaii	Foailalo RDH	Satisfactory	Good	Poor?	Poor	Satisfactory	Satisfactory		Satisfactory	
	Sataua RHD	Good	Good	Poor?	Good	Satisfactory	Satisfactory		Good	
	Safotu RHD	Satisfactory	Satisfactory	Poor?	Satisfactory	Poor	Satisfactory		Satisfactory	

Source: MoH& DMO Disaster Risk Resilience Hospital inspection 2016-2017

The detailed Hospital Risk resilience report discusses the general standards and provides examples of both good and poor standards. The detailed report also provides recommendations resulting from the

assessment activities carried out by representatives of the MoH and DMO. The reports have already been distributed to the hospitals and NHS for their review. It is anticipated that yearly inspections will be conducted to monitor the progress of the recommended activities and ensure that there is improvement on the recommended actions.

Safety Procedures in Place for Disasters

The MoH and DMO are currently working with Rural District Hospitals and Health Centres to develop risk management plans for each hospital. This could include develop a short poster/document that consists of them procedures for fire and tsunami evacuation, key phone numbers, safe meeting area, key information for example helicopter landing site GPS coordinates and map with travel times.

As a result of the disaster risk resilience assessment for all hospitals, the assessment team created a map for MoH and the hospitals (including rural district hospitals) to be familiar with their assets during disaster events. During the feedback visit that took place in June 2017, each hospital was provided a map with the following:

- Hospital locations
- Tsunami Hazard Zones
- Bridges and Fords
- Airports, wharfs and fire stations
- Routes and travel times to the main hospitals
- Helicopter landing sites
- Other key information, like phone numbers and key personnel could perhaps also be included.

The MoH held a workshop on Health Sector Consultation on DRM Strategy and linkages to the IHR in June 2017 to contextualize the Health Sector DRM strategy. The workshop was attended by more than 60 representatives across sector together with representatives from DMO to facilitate the process. The DRM Strategy now provides a framework for action that can be built on as opposed to replacing existing policies and practices for the Health Sector. It therefore advocates for a comprehensive approach to risk management and factors inform planning, implementation, monitoring and evaluation and reporting.

The following are the recommended outcome indicators to be considered for long term outcome 7 presented by one of the groups which focused on reviewing of Outcome 7 Indicators during the above mentioned workshop.

1. % of water sources to communities reporting contamination
2. Number of deaths due to natural disasters
3. Number of injuries to natural disasters
4. % of increase of vector borne disease up to 3 months post disaster
5. % of people properly treating drinking water
6. % of people reporting awareness and preparedness and preparedness for climate change, disaster and emergencies.

As also noted in the Mid Term Review of the HSP 2008 – 2018, most of the indicators for Outcome 7 need to be revisited because they are mainly focused on policy level rather than operational level. Indicators need to reflect current DRM and CC activities to ensure that they can easily monitored.

Percentage of water service providers with water safety plans developed or reviewed in the last 5 years

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
% of water service providers with water safety plans developed or reviewed in the last 5 years	80% treated supplies 33 independent scheme untreated 37 bore holes untreated	100%	4 Water Safety plans for independent water schemes being and implemented. 4 water safety plans for Samoa Water Authority being drafted.	4 water safety plans developed & 4 water safety plans being drafted	**Achieved**

The Water Safety Plans use a comprehensive risk assessment and risk management approach that encompasses all steps in the water supply from catchment to consumer to consistently ensure the safety of water supplies. The basic principles applied are the following:

- Prevent contamination, do not wait for it to happen
- Use multiple barriers so that if one barrier fails the water stays safe
- Use management systems to make water safety management reliable
- Every improvement is worth it and helps improve public health

So it is important for every scheme under Samoa Water Authority and Independent Water Scheme to develop a water safety plan in order to improve water quality. This assessment will assist on what needs to be done immediately to ensure that high quality water is consumed by the public.

Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
% of registered skilled health professionals with competencies to respond to emergencies and disasters.	n/a	Increase by 50%	-	Health professionals were trained during disaster and emergency disaster drills for the tsunami in 2009 & Cyclone Evans in 2012 and disease outbreaks drills conducted by the sector for H1N1 in 2009 & Ebola in 2015.	**Achieved**

This indicator has not been specifically measured but health professionals as well as other health staff were well trained to build their capacity to respond to natural disasters, emergencies and disease outbreaks. They were trained on the application of the International Health Regulations 2005 and the activation of their disaster and emergency response plans.

Key Outcome 7 Overall Summary

Even though the indicators under Key Outcome 7 are not outcome indicators as they do not measure the impacts of strategies and/or interventions in place to respond to climate change and disasters, the Ministry of Health and the health sector had done a tremendous work in addressing these issues and consider them to be integrated in their plans and programs of works.

In order for the great efforts by the sector in addressing climate change issues in health and enhancing their response to disasters and disease outbreaks, indicators under this Key Outcome should be revised.

2.3 Health Sector's Performance against the Health Sector Plan 2008-2018 Work Program

This section presents the health sector's performance against the Work Program of the Health Sector Plan 2008-2018, and these are categorized under the six (6) key strategies and their outputs:

2.3.1 Health Promotion and Primordial Prevention

OUTPUT	INDICATOR	STATUS AT 2018
Effective healthy public policies developed and implemented	Evidence of the implementation of the National Health Promotion and Prevention council decisions.	Establishment of the Health Promotion Foundation was approved by the Cabinet in March 2013. The Health Promotion Foundation Act 2015 was passed by the Parliament in 2015. However, implementation of the National Health Promotion did not happen.
	Develop and implement an infant and young child feeding policy.	This is incorporated in the National Food and Nutrition Policy 2013-2018
	Develop and implement an effective Communicable Disease Policy and Plan of Action.	There is no National Communicable Disease Policy developed as there are already specific Communicable Disease policies in place. These include: National HIV/AIDS and STI Policy 2017 – 2022, National Health Prevention Policy 2013-2018, National Infection Control Policy 2011-2016 & National HIV/AIDs Policy 2011 – 2016.
	Compliance with International Health Regulations	The compliance of the Ministry of Health and the sector with International Health Regulations is rated from 70% in 2013 during the mid-term review to 100% in 2018. IHR capacity buildings are conducted by the Disease Surveillance and IHR division on regular basis for health professionals and stakeholders.
	Evidence of increasing healthy living practices.	Increase in numbers of community groups facilitating and lead in implementing physical activities through sports events and Zumba exercises.
	Evidence of appropriate policies developed in response to emerging health issues, including health threats arising from increased urbanization.	The Ministry of Health in collaboration with the health sector was able to develop and implement 20 national health policies within these 10 years. There are four policies that are currently being reviewed and updated. These are highlighted in Figure 45.
	Annual reduction in sales of tobacco in Samoa	Not measured
Improve environmental health	Evidence of collaboration with and between health sector partners to create safe and healthy village environments for Samoan families and children.	Collaboration with MWCSD, MESC, Red Cross Society, NCC, MNRE, MAFF and Komiti Faufautua o le Soifua Maloloina for Upolu and Savai'i.
	Evidence of strengthened programs related to poverty, vulnerability and hardship.	NHS provide health services and medication free/at low cost to vulnerable groups: children below 12 years, antenatal mothers, elderlies aged 65 years and above, NCD patients, people with disabilities including mental health.
	Design and implement effective programs to reduce endemic typhoid, diarrhea, Filarisis and tuberculosis in Samoa.	Monthly Communicable Disease Coordination Committee meetings. Surveillance systems in place and monitored by the National Disease Surveillance and IHR division of MOH TB Dots program in place and implemented MDA for Filarisis conducted in 2008, 2010, 2015, 2017 and 2018 & TAS surveys in 2013 & 2017.
	Design and implementation of programs to reduce all communicable disease in	Village health fair in 2011, ongoing multi-sectoral program conducted involving MOH, NHS, MWCSD,

OUTPUT	INDICATOR	STATUS AT 2018
	Samoa	Samoa Red Cross Society, Samoa Family Health Association, and other sector partners.
	Implement and monitor the Healthcare Waste Policy	Ongoing quarterly healthcare waste management monitoring visits to all healthcare wastes sources both in public and private health facilities. Procurements of healthcare waste truck, color-coded bins and safety gears for healthcare waste handlers for the health sector.
	Develop a Safe Water Policy and Plan of Action.	4 Water Safety plans for independent water schemes being and implemented. 4 water safety plans for Samoa Water Authority being drafted.
	Evidence of improved water quality through testing and monitoring	The level of compliance of water sources with the National Drinking Water Standards is increasing: SWA Boreholes = 7% increase Bottled Water Companies = 12% increase SWA Treatment Plants = 6.9% increase
Community actions strengthened	Evidence of collaboration with community, cultural and religious, social structures in health promotion and primordial prevention campaigns.	Ongoing collaboration with MWCSD to implement the Aiga ma Nu'u Manuia, MESC to promote health and physical education and smoke free school environment, MNRE and SWA for water quality, hygiene and sanitation, Teen Challenge and YWCA for youth health advocacy programs and Komiti Faufautua o le Soifua Maloloina for community health promotion and promotion programs.
	Evidence of community action to support improved diet and exercise options for Samoans – e.g. Home fruit and vegetable gardens, work with school canteens.	Village Health Fair that was conducted in 2010 & 2011 promoting physical activity and healthy eating. PEN Fa'a-Samoa NCD screening program in the community that was commenced in 2015, Integrated Community Health Approach Program that was started in 2016 in collaboration with the MESC, MWCSD and other stakeholders.
	Evidence of community initiated actions on health.	Smoking is banned in village council meetings Healthy eating is encouraged in some church groups gatherings Increase in numbers of Zumba programs initiated and led by village groups, workplaces and individuals.
	Evidence of collective advocacy on health.	SPAGHL and WinLA are prominent advocacy health groups that were formulated in 2010 to lead the promotion of healthy lifestyles and living at all levels.
Build up personal healthy life skills and choices for individuals.	Evidence of increasing healthy living practices.	Increase in numbers of community groups facilitating and lead in implementing physical activities through sports events and Zumba exercises.
	Evidence of increasing sector partner programs aimed to enhance life skills and healthy choices.	1. Eat the colors of the rainbow in collaboration between MOH, MESC, MAF 2. Integrated Community Health Approach Program (ICHAP) in collaboration with SFHA, Samoa Red Cross Society 3. PEN Fa'a-Samoa NCD Screening Program in collaboration with MWCSD, Sui o Nu'u and Sui Tama'ita'i o Nu'u 4. Health Promoting Schools Program in collaboration with MESC and schools

OUTPUT	INDICATOR	STATUS AT 2018
		5. Drinking Water Quality and Sanitation Programs in collaboration with the MNRE and SWA.
	Evidence of increasing awareness on available health options and healthy choices.	Multi-media health promotion and prevention campaigns, commemoration of world health events and national health week, annual health sector forums, school health programs, sports, and Komiti Faufautua monthly meetings.
	Evidence of regular evaluation of the effectiveness of existing programs.	Annual Health Sector Forum reports, Annual Health Sector Review reports, Annual Reports, Corporate Plan Review Reports.
	Annual reduction in amount of alcohol consumed and monitoring of meaningful indicators of alcohol related injury and/or illness.	Alcohol consumption was measured in NCD STEPS Survey 2002 & 2013. This indicates that there is a 12.4% reduction in alcohol consumption from 29.3% in 2002 to 16.9% in 2013. The Ministry of Police monitored alcohol related accidents.
	Annual reduction in tobacco consumed and monitoring of indicators of tobacco related illnesses.	Tobacco consumption was also measured in NCD STEPS 2002 & 2013. Similar to alcohol consumption, the results from these surveys indicates that there is a 13.2% reduction in tobacco consumption from 40.3% in 2002 to 27.1% in 2013. Monitoring of lung cancer indicators are reflected under the Annual Health Sector Review reports.
Continue and strengthen health services reorientation.	Evidence of the share of health responsibilities by district level health services and non-government health sector.	Private GPs are continuously contracted by National Health Service to provide weekly sessions in district hospitals. Auxiliary are effectively engaged.
	Increase over time in share of resources dedicated to health promotion.	During the SWAp implementation, there's an increase in health expenditure allocated for health promotion programs. NHA 14/15 shows that 49% of health expenditure on preventive care was spent on health promotion.

2.3.2 Quality Healthcare Service Delivery

OUTPUT	INDICATOR	STATUS AT 2018
Control and manage selected communicable and non-communicable diseases	Develop in priority order of clinical protocols that are evidence-based, adapted to local conditions and cover the range of healthcare settings in Samoa, including specific patient referral pathways.	Clinical guidelines are developed and implemented for anaesethia, ENT, Internal medicine, Mental Health, Pediatrics and Emergency department. Child Health Booklets, Safe Motherhood Guidelines are being reviewed and updated for implementation.
	By 2018, all communicable and non-communicable diseases of significance in Samoa will be managed by clinical protocols.	Screening, testing diagnosing and monitoring of HIV, STI and TB follow the guidelines developed for these diseases. Screening and monitoring of NCD diseases in health facilities and PEN Fa'a-Samoa follows the NCD clinical protocols.
	Protocols specify resources, staffing, training and technology implications and programmatic implementation.	
	Regular clinical audits of the implementation of these protocols.	Clinical audits for clinical protocols are implemented by the Quality Assurance Divisions of the Ministry of Health on quarterly basis every year.
	Strengthen closer working relationships including negotiating referral pathways with traditional healers, involving village mayors.	Guidelines for TBAs 2010 were updated in 2018 to guide the work of registered TBAs that are well-trained and work closely with community nurses.

<table>
<tr><th>OUTPUT</th><th>INDICATOR</th><th>STATUS AT 2018</th></tr>
<tr><td></td><td>Decrease hospital readmission and post-operative infection rates. This indicator requires the development of hospital information system.</td><td>Not measured.</td></tr>
<tr><td></td><td>Establishment of chronic disease registers and evidence based programs for screening and early intervention including at least cancers, diabetes and rheumatic heart disease.</td><td>Rheumatic Fever database was developed for the Rheumatic Heart Disease screening conducted for primary schools in 2010.
Diabetic patients register was developed by the Samoa Diabetic Association Clinic.
Cancer Patients register is yet to be developed.</td></tr>
<tr><td></td><td>Compliance with International Health Regulations.</td><td>The Health Sector is 100% compliance with the 13 core capacities of IHR.</td></tr>
<tr><td>Improved reproductive, maternal and child health.</td><td>Clinical audits of the implementation of safe motherhood protocols across healthcare system.</td><td>Clinical audits of the safe motherhood protocols are the mandated functions of the Ministry of Health Quality Assurance Division for Nursing and Midwifery.</td></tr>
<tr><td></td><td>Increased intake of vegetables and fruits by households.</td><td>Fruits and vegetables intake by household was measured in NCD STEP Surveys 2002 & 2013 and DHS 2009 & 2014.
SDHS 2009 – 4% of women & 10% of men consumed 5+ serving of fruits and vegetables per day.
STEP Survey 2013 – 8% of women and men consumed 5+ servings of fruits and vegetables per day.
SDHS 2014 – 4% of women & 17% of men consumed 5+ servings of fruits and vegetables per day.</td></tr>
<tr><td></td><td>Increase in pre-schools and schools complying with school healthy food/canteen standards.</td><td>The National School Nutrition Standards was officially launched in 2012 for implementation and the level of compliance of schools with these standards is increased from 14% in 2013 to 36% in Financial Year 15/16, 33% in 36% FY16/17 and 36% in FY2017/18.</td></tr>
<tr><td></td><td>Increased availability of micro-nutrient fortified foods in shops (e.g. iodized salt, flour fortified with iron and other micro nutrients).</td><td>The Nutrition Section of the Ministry of Health continues to monitor the selling of fortified foods in shops including wholesale, retail shops and supermarkets. The outcomes of their monitoring visits for wholesales are detailed below:
<table>
<tr><th rowspan="2">Year</th><th colspan="3">No. of Wholesales Selling:</th></tr>
<tr><th>Fortified Flour</th><th>Fortified Rice</th><th>Iodized Salt</th></tr>
<tr><td>2013</td><td>2 out of 6</td><td>4 out of 6</td><td>0 out of 6</td></tr>
<tr><td>2014</td><td>3 out of 4</td><td>3 out of 4</td><td>3 out of 4</td></tr>
<tr><td>2015</td><td>2 out of 3</td><td>1 out of 3</td><td>2 out of 3</td></tr>
<tr><td>2017</td><td>2 out of 4</td><td>3 out of 4</td><td>3 out of 4</td></tr>
</table></td></tr>
<tr><td></td><td>Each annual audit shows evidence of increasing compliance of main hospitals with WHO/UNICEF Baby Friendly Hospital protocol.</td><td>The Nutrition Section of the Ministry of Health monitors the implementation of WHO/UNICEF Baby Friendly Hospital protocols in main hospitals. The level of compliance is increasing from 50% in FY14/15 to 65% in FY15/16 to 70% in FY17/18.</td></tr>
<tr><td></td><td>Annual increase in the proportion of pregnant women attending antenatal clinics in the first 20 weeks of gestation.</td><td>The proportion of pregnant women attending antenatal clinics in the first 20 weeks of gestation is decreased from 13.2% in 2009 to 12% in 2014 (DHS).</td></tr>
<tr><td></td><td>Evidence based interventions to reduce anemia in children are implemented.</td><td>The Strategy for Anemia referring to children and Maternal & Child Health was endorsed in 2009/10.
Multi-media campaign and awareness programs are integrated as part of Health Promoting Schools.</td></tr>
<tr><td></td><td>Decrease in the proportion of babies born less than 2500 grams or over 4500 grams.</td><td>The proportion of babies born less than 2500 grams is decreased from 10.2% in 2009 DHS to 4.9% in DHS 2014.</td></tr>
<tr><td></td><td>Annual decrease in the proportion of women attending antenatal clinics who are anemic at 36 – 40 weeks.</td><td>Impractical to collect data for this indicators as all women attending antenatal clinics are given iron tablets and nutrition education.</td></tr>
<tr><td></td><td>Strengthen closer working relationships including negotiating</td><td>Strong relationship is recognized between the community nurses, district hospitals and TBAs as TBAs</td></tr>
</table>

OUTPUT	INDICATOR	STATUS AT 2018
	referral pathways with Traditional Birth Attendants, involving village mayors.	are trained to assist the midwives in health facilities for providing safe birth deliveries.
	Increase in the proportion of babies exclusively breastfed at 5 months.	The proportion of babies exclusively breastfed at 5 months has been increased by 19% from 51.3% in 2009 (DHS) t0 70.3% in 2014 (DHS).
	Annual decrease in the number of infants admitted to MTII and TTM hospitals with diarrhea and respiratory tract infections	Admissions of children under 5 years old for respiratory tract infections is decreased from 2.4% in 2009 (DHS) to 1.9% in 2014 (DHS). For diarrhea, it is decreased from 4.9% in 2009 to 3.5% in 2014.
	Annual increase in the proportion of babies fully vaccinated at 18 months to at least 90% for all vaccines on schedule within 5 years.	Proportion of babies being fully vaccinated at 18 months is increased by 30% from 20% in 2009 (DHS) to 50% in 2014 (DHS).
	Annual reduction in the incidence of rheumatic fever.	New cases have increased due to better screening program funded under the SWAp program and the ongoing Rheumatic Fever screening under the Utah University Studies.
	Annual increase in the proportion of rheumatic fever patients complying with treatment.	Compliance to IM penicillin in 2008 = 84%, 2010 = 86%.
	Develop and implement a national pap smear screening program.	This is planned to be rolled over in the new Health Sector Plan FY2019/20 – FY2029/30
	Develop and implement a national well women's health screening program (to include pap smear, breast screening, blood pressure and blood glucose.	Other women's health screenings are conducted as part of antenatal clinic.
	Increase in the proportion of new school entrants who receive a comprehensive community health assessment.	National School Nurse Policy 2018-2023 was officially launched in Nov. 2018 and this will strengthen existing school health programs such as oral health, hygiene, healthy eating and immunization.
	Sexually Transmitted Infections program designed, resources and effective at measuring and then reducing prevalence rates.	UNDP Global Fund Project for HIV and STI since 2008 National HIV/AIDS Policy 2011 – 2016 was reviewed and updated to National HIV/AIDS and STI Policy 2017-2022. Monthly Sexual Reproductive Health Stakeholder Meetings for intra-sector planning and performance monitoring. Quarterly monitoring visits for HIV/AIDS & STI Ongoing multi-media campaign and awareness programs for HIV/AIDS and STI and Sexual Reproductive Health.
	Increase in the proportion of married women using modern contraceptive methods.	Decrease of 5.7% in married women from 30% in 2009 to 24.3% in 2014 (DHS).
	Evidence of strengthened coordination of health services with family and children services in Ministry of health.	Integrated Community Health Approach Program what was initially implemented in the community in 2016. Mobile immunization program for children ≤ 5 years in the community and primary schools across the nation.
	Evidence of decreasing rates of children brought to hospital suffering from injuries.	50% decrease from 290 per 1,000 admissions in 2012 to 141 per 1,000 admissions in 2015.
Improved health care physical infrastructure and equipment.	Establish of an Asset Management Policy and Plan for all publicly funded healthcare facilities and equipment.	The Asset Management Policy and Plan was developed in 2012 and handed over to National Health Service to administer and implement.
	Priority medical equipment purchased/upgraded and utilized.	Medical equipment for the new TTM and refurbished MTII were procured under the Health SWAp project.
	Establishment and monitoring of regular preventive maintenance program for health care	This program was developed and started implementation in 2013.

OUTPUT	INDICATOR	STATUS AT 2018
	infrastructure.	
	Standardized physical infrastructure and equipment for different levels of care at referral and district level hospitals in line with services to be provided at these different locations and levels of healthcare.	Refurbishments for district health facilities were funded the Health SWAp project. These include the refurbishment of Poutasi, Lalomanu, Safotu, Foailalo and Sataua district hospitals. New health centres built under the SWAp project include Avao Health Centre and Faleolo Health Centre. Upgrading of both rural health facilities and referral hospitals was conducted together with the upgrading of medical equipment required for each health facility.
	Improve facilities and equipment at the national referral hospital (TTMH)	The new TTM hospital was officially opened with new equipment on 1 July 2013. This was funded by the People's Republic of China.
Implementation of professional and service standards.	Applicable health services standards developed for each professional group and health service provider.	The Healthcare Professional Registrar position was established in 20089. The Quality Assurance Divisions of the Ministry of Health (Medical and Allied Health & Nursing and Midwifery) in collaboration with health professional councils developed and monitored the implementation of the Professional Services Standards for medical, Nursing & Midwifery, Dental, Pharmacy and Allied Health professionals.
	Performance indicators and/or audit strategy developed for each health profession.	Standard of Procedures and competencies for various health professionals have been reviewed and updated, but need to properly monitor. Not all health professionals have performance appraisal systems in place.
	Regular, timely and comprehensive reports by NHS and other health services against these performance indicators to MOH.	The NHS and other health service providers' performance indicators reporting to MOH is infrequent. Thus require a proper reporting format and timeframes to be developed.
	Evidence of policy and regulatory action taken by MOH in response to performance reporting.	Complaints received are investigated by Healthcare Professional Register and report to the Director General and respective health professional councils. Implement the National Patients Grievance and Complaints Policy 2015-2020.
	Quarterly clinical audits completed and aggregated results reported to MOH, highlighting areas of concern.	Regular clinical audits conducted by Quality Assurance divisions of the Ministry of Health (Medical and Allied Health & Nursing and Midwifery) as required due to critical incidents.
Skilled and competent health professionals and support staff	Increase in number of Samoan students undertaking health related studies.	There's an increase in numbers of students undertaking health related studies in both local and overseas universities. These are funded the government scholarship scheme and WHO biennium budgets.
	Reduction in staff turnover rate in all health sector employers every year.	Staff turnover for the Ministry of Health has been increased from 11 staff in FY2015/16 to 18 staff in 2017/18. This is due to promotion and undertaking further health studies overseas.
	Development and implementation of appropriate career paths for health workers.	Recruiting of auxiliary nurses in health facilities to assist with the shortages of nursing staff. NHS Workforce plan developed in 2014 and implemented.
	Median age of staff cohorts, reflecting succession planning and workforce sustainability.	Retirement age increased to 60 years to allow time for younger staff to absorb institutional knowledge and values.
	Professional supervision structures and processes for both clinical and professional staff developed reflecting professional standards.	Re-credentialing process for nurses is ongoing and assessed by the nursing professional supervisor/s.
	Implementation of staff appraisals for MOH and NHS staff	NHS and MOH appraise the performance of their staff using the Public Service Commission Appraisal system.

<table>
<tr><th>OUTPUT</th><th>INDICATOR</th><th>STATUS AT 2018</th></tr>
<tr><td></td><td>Progress toward workforce progress targets across the health sector, starting with their development.</td><td>Human Resources for Health Policy and Plan of Action was reviewed in February 2010 and the second edition is schedule to be developed within the Financial Year 2018/19.</td></tr>
<tr><td rowspan="3">Accessibility and affordability of healthcare services and supplies</td><td>Improve public access for all Samoans to publicly funded healthcare facilities with clear guidelines on accessibility and affordability, complementary to private sector.</td><td>User fees maintained at low level to facilitate universal access and promote Universal Health Coverage. Strengthening the public health system and revitalization of Primary Health Care is the health sector priority that is now highly considered in the merging of the National Health Service and Ministry of Health.</td></tr>
<tr><td>Elimination of deficits in NHS Pharmacy Stock of WHO Essential Medicines List</td><td>Ongoing monitoring and review of the National Medicine Policy 2009.
Development of the new National Medicine Policy is in the pipeline.
Building of the Pharmaceutical Warehouse for Samoa in 2016.</td></tr>
<tr><td>Development of public dental health program with clear guidelines on accessibility and affordability, complementary to private sector.</td><td>Mobile community dental clinics are ongoing for schools and there were 3 static clinics operated in the largest primary schools in Upolu which were funded under the Health Sector SWAp.</td></tr>
<tr><td rowspan="4">Strengthened community health sector</td><td>Development of community health capacity and program activities and standards in districts.</td><td>Primary health care centre was officially launched in November 2016 aiming at ensuring that the primary health care is continuously strengthened and the clinic was funded by the Health SWAp through the partnership between the government of Samoa, World Bank, governments of New Zealand and Australia. This centre was headed by the Primary Health Care Manager that was appointed in 2013.</td></tr>
<tr><td>Development and implementation of distinct roles, standards and workforce for district hospital services and development and implementation of referral protocols for patients being referred to MTII and TTM Hospitals.</td><td>Ongoing credentialing programs for clinical nurses both in hospital and rural primary health care.</td></tr>
<tr><td>Increase in the proportion of suspected mental health cases referred to the mental health unit who are followed up.</td><td>In 2017, the number of mental health suspected cases refereed to mental health has increased from 77 in April to 126. The majority of cases are the ones that had been followed up in the community.</td></tr>
<tr><td>Rate and type of preventable hospital admissions decrease consistently over the plan period.</td><td>
<table>
<tr><th>Admissions</th><th>FY2014/15</th><th>FY2015/16</th></tr>
<tr><td>Acture 8 Ward</td><td>1,834</td><td>1,910</td></tr>
<tr><td colspan="3">There is an increase in numbers of patients being admitted to medical ward.</td></tr>
<tr><td>Pediatrics Ward</td><td>2,294</td><td>2,325</td></tr>
<tr><td colspan="3">There is an increase in numbers of admissions from 2,294 in FY2014/15 to 2,325 in FY2015/16.</td></tr>
<tr><td>Antenatal Ward (high pregnant mothers)</td><td>6,311</td><td>6,533</td></tr>
<tr><td>(antenatal inpatient care)</td><td>3,120</td><td>3,025</td></tr>
<tr><td colspan="3">These results indicate that there is a slight increase in numbers of high risk pregnant mothers being admitted. Similar to antenatal inpatient care. Thus, more women are utilizing the health facilities since the new hospital opened.</td></tr>
</table>
</td></tr>
<tr><td></td><td>Reduction in the rate of amputation amongst diabetics as a measure of</td><td>26 amputations (both above knee & below knee) were noted in the year 2017</td></tr>
</table>

OUTPUT	INDICATOR	STATUS AT 2018
	system of care effectiveness	
Essential clinical and diagnostic supportive health services	Establishment and annual progress in the implementation of a development program for laboratory, pharmacy, sterilization, radiology and allied health services.	Support services are house under the National Health Service TTM and new equipment provided for two public hospitals (TTM & MTII) were procured under the Health Sector SWAp program. NHS Workforce Plan was officially launched in 2014 and this is due to review taking into account the merging of both entities (NHS&MOH) that was effective on 1 February 2019.
	Service standards for each of these services established and implemented.	MOH Services Standards were updated in 2014 to guide and give directions to the Ministry of Health's stewardship and governance role, ensure the Ministry's performance of its mandated functions and responsibilities are on the right track, and encompass the diversity and complexity of the staff services from all the Ministry's respective divisions to meet the client needs within the framework of its mandated functions. Professional standards for medical, pharmacists, nursing and midwifery, dental and allied health were also developed and updated to guide the work of these health professionals to ensure they are complied with their mandated roles and responsibilities articulated in their respective professional legislations.
Establish consumer complaints and community engagement for healthcare services	Consumer complaints mechanism required by MOH Act 2006 designed and implemented.	The National Patients Grievance and Complaints Policy that was officially launched in 2015 strives to resolve complaints and grievances if possible from patients, and identify any aspects of service delivery which require change for improvement. The complaints processes in this policy are bound by various legislative requirements.
	Decrease rates of complaints received by MOH	The numbers of complaints received by MOH from patients was decreased from 2 complaints in the first year of implementation of the National Patients Grievance and Complaints Policy 2015 (2016) to nil in 2018.

2.3.3 Regulatory, Governance and Leadership Role of the Ministry of Health

OUTPUT	INDICATOR	STATUS AT 2018
Strengthened strategic linkages with other sectors and sector partners	Health sector plan (HSP) approved, funded and implemented	HSP 2008-2018 has been approved and the implementation was terminated on 31st December 2018. Remaining activities that were not achieved during the HSP period are modified and or rolled over to the new HSP (i.e. FY2019/20 – FY2029/30).
	Evidence that sector partners' corporate plans, development partners' plans, government investments are increasingly aligned with HSP	MOH, NHS and NKFS each have Corporate Plans and these are derived from the Health Sector Plan 2008-2018
	MoUs and contracts agreed and implemented with sector partners and service providers to reflects this alignment.	MoUs with General Practitioners (GPs), GOSHEN, Samoa Cancer Society, Samoa Red Cross Society, Samoa Aids Foundation, Samoa Fa'afafine Association, Samoa Family Health Association, National University of Samoa and Community Groups.
	Coordinating and financial planning role of MOH strengthened	Coordination through sector meetings (Health Program Advisory committee), weekly public health sector leaders meeting with the Hon. Minister of Health, weekly MOH management

<table>
<tr><th>OUTPUT</th><th>INDICATOR</th><th>STATUS AT 2018</th></tr>
<tr><td></td><td></td><td>meetings, MOH monthly Operational management meetings and weekly MOH technical meetings every Tuesday.</td></tr>
<tr><td></td><td>NGO, health sector strengthened as integrated components of health system</td><td>GOSHEN, Samoa Family Health Association, Samoa Cancer Society, Samoa Red Cross Society, are supported by MOH and continues to work in partnership.</td></tr>
<tr><td>Increased accountability and transparency at all levels</td><td>Sector partner specific communication strategies developed, approved and implemented.</td><td>Annual health sector forums are ongoing since 2008.
Annual health sector reviews at the end of every financial year.
Bilateral Health summit with American Samoa every two years are ongoing.</td></tr>
<tr><td></td><td>Internal and external audit reports reveal good financial probity including procurement.</td><td></td></tr>
<tr><td></td><td>Public Service Commission monitoring finds appropriate implementation of human resource policies</td><td>Monthly public sector HR coordinators forum. Common issues debated and addressed and policies approved. Performance appraisal system modified and monitored. Workforce plan for the new MOH is under development.</td></tr>
<tr><td>Increased availability of appropriately qualified skilled health workforce</td><td>Human Resources for Health Plan 2008-2015 developed, approved and implemented.</td><td>The Human Resources for Health Policy and Plan of Action 2008-2015 was officially launched in 2008. Completed mid-term and full review of the policy and the development of the new policy is under development.</td></tr>
<tr><td></td><td>Increase over time of qualified specialists in Samoa, consistent with priorities identified in the Human Resources for Health Plan.</td><td>Slight increase in numbers of doctors, dentists and pharmacists since 2011, and significant increase in numbers of nurses and midwives as indicated in the table below:
<table>
<tr><th>Nos. of Professionals</th><th>2011</th><th>2018</th></tr>
<tr><td>Doctors</td><td>89</td><td>108</td></tr>
<tr><td>Dentists</td><td>13</td><td>17</td></tr>
<tr><td>Pharmacists</td><td>9</td><td>13</td></tr>
<tr><td>Registered Nurses</td><td>135</td><td>274</td></tr>
<tr><td>Enrolled Nurses</td><td>71</td><td>90</td></tr>
<tr><td>Midwives</td><td>37</td><td>79</td></tr>
</table></td></tr>
<tr><td></td><td>Increasing utilization of Samoa nationals with relevant expertise and competencies to fill key positions in Samoa’s health sector</td><td>NKFS and NHS staff are all Samoans except the interns from overseas that come for their fieldwork and overseas visiting specialists/teams for temporary visits.</td></tr>
<tr><td></td><td>Professional credentialing for health service providers introduced for all professions and strengthened.</td><td>Ongoing professional credential program for nurses and midwives.</td></tr>
<tr><td></td><td>Evidence of continuing professional education and competency based re-credentialing.</td><td>Issuance of health professionals Annual Practicing Certificates requires 20 hours professional education and demonstration of competencies.</td></tr>
<tr><td></td><td>Evidence of increase numbers of midwives to meet demands</td><td>Increased the numbers of midwives from 37 in 2011 to 79 in 2018.</td></tr>
<tr><td></td><td>Develop, approve and implement Health Service Marketing Strategy to aggressively attract Samoans to health careers.</td><td>Training of youth representatives from the community to become auxiliary nurses.
Training of women in village women’s</td></tr>
</table>

OUTPUT	INDICATOR	STATUS AT 2018
		committee and young women from the community in implementing basic screening and testing for the PEN Fa'a-Samoa program implementation in the community. Health career talk program targeting public, private and church colleges are conducted on yearly basis as part of annual health sector forum programs.
	2 yearly review of the implementation of Human Resources for Health Plan 2008-2015	Completed the mid-term and final review of the Human Resources for Health Policy 2008-2015 and Plan of Action. These were held in 2010 and 2016. The development of the new Human Resources for Health Policy is on pipeline.
Effective statutory bodies	Accountable and effective professional boards/councils established under legislation: NHS, Medical, Nursing, Dental, Pharmacy, Allied Health Service Providers	Professional councils for medical, nursing and midwifery, pharmacy, dental and allied health are all established. Councils strengthened by inclusion of community representatives and nurse on medical council and doctor on nursing council. Health professional continues to meet on monthly basis.
	MOH monitoring reports and NHS reports to NHS Board and CEO indicate quality standards being met within budget with transparent due diligence.	NHS reports were submitted to NHS Board on monthly basis against annual work program. This is no longer existed since MOH and NHS officially merged on 1st February 2019.
Evidence based policies, monitoring and regulatory frameworks	Consolidate and communicate existing policies across health sector	The Strategic Planning, Policy and Research Division continues to maintain and update the Health Plans, Policy and Strategies register on monthly basis. Development, monitoring and review of health policies are conducted through multi-sectoral approach with sector partners and other sectors.
	Establish performance monitoring and regulatory framework for MOH with NHS and all other health service providers.	The Health Sector Monitoring and Evaluation Framework was officially launched in 2011 for the sector to implement.
	Evidence of performance monitoring leading to policy and regulatory action to improve health services.	Quality Assurance Divisions of MOH (for Medical and Allied Health & Nursing and Midwifery) conducted monitoring on quality assurance and service performance of health service providers while the Strategic Planning, Policy and Research Division concentrates on monitoring the implementation of national health plans, strategies and policies, Health Protection and Enforcement Division on monitoring and enforcement of public health legislations and Health Sector Coordination, Resourcing and Monitoring Division on monitoring the health projects/programs and resource utilization.
	Professional services standards developed, approved and implemented for all health service providers.	Healthcare Professional Standards are developed, implemented, monitored and reviewed for:

OUTPUT	INDICATOR	STATUS AT 2018
		- Medical professionals - Nursing and midwifery - Pharmacists and - Allied health professionals
	Evidence of effectiveness of monitoring and regulating by MOH	Improved compliance on the following: - 70% compliance of hospitals with Baby Friendly Hospitals Standards - 56% compliance of schools with School Nutrition Standards - 79% compliance of the public with the Tobacco Act 2008 - 95% of food premises with Food Act 2015 There is a need to evaluate the compliance of health professionals with their Standards Operating Procedures.
Legislative framework in place	All health related legislations reviewed and updated by 2008.	**<u>Professional Acts:</u>** - Allied Health Professionals Act 2014 - Healthcare Professional Registration and Standards Act 2007 - Dental Practitioners Act 2007 - Medical Practitioners Act 2007 - Nursing and Midwifery Act 2007 - Pharmacy Act 2007 **<u>Organizational Acts:</u>** - National Health Service Amendment Act 2014 **<u>Regulations:</u>** - Food Regulations (2017) - Tobacco Regulations (2013) **<u>Others:</u>** - Health Promotion Foundation Act 2015 - Health Legislations Handbook 2008 - Tobacco Control Act 2008 - Food and Drugs Act 1967 - Mental Health Act 2007 - Narcotics Act 1967 - TBA Guidelines 2018
	Public feedback is positive	
Effective response to international and regional programs	International and regional initiatives translated and applied where appropriate to sector programs	Continued networking on international and regional levels with key organizations such as WHO regional meetings, World Health Assembly, Secretariat of the South Pacific, and UNDP-Global Fund.
	Sharing of information on development assistance funding schemes and programs	Sharing of information is through Health Programs Aid Committee on monthly basis.

2.3.4 Partnership Commitment

OUTPUT	INDICATOR	STATUS AT 2018
Complementarities in sector planning	Health indicators links evident in other sector plans and policies	- Community development sector plan 2016-2021 (MWCSD) – "empowering communities to lead inclusive development for quality of life for all through supporting the achievement of basic health outcomes for most vulnerable. - Water and Sanitation Sector Plan 2016-2020 (MNRE) – "Water for Life: Drinking Water Quality and Sanitation" - Samoa National Environment Sector Plan 2017-2021 – "Climate Change and Disaster Risk Management and Waste Management"
Strengthened communication and collaboration	Sector partner specific Communication Strategies implemented	- Ongoing strong partnership with MWCSD, MESC, Samoa Red Cross, Samoa Family Health Association, Samoa Cancer Society and MOH responds to request for support financially and technically when necessary.
	Evidence that private practitioners are effectively utilized in public sector, where cost effective	- Outsourcing of private general practitioners to provide medical services in rural health facilities.
	Effectiveness of National Councils and Advisory Committees in health	- Professional councils established for Medical, Nursing and Midwifery, Pharmacists, Dental and Allied Health Professionals. Health Program Advisory Committee is maintained.
	Strategic Sector policies and strategies widely consulted and approved.	- Consultations with partners and stakeholders of health are always the important part of any approved health policy and plans/strategies.
Effective response to international and regional programs	International and regional initiatives translated and applied where appropriate to sector programs.	Continued networking with international and regional health organizations such as WHO, UNFPA, SPC, UNDP-Global Fund
		Domestication of International Health Regulations 2005
		Advocating health during the commemoration of World Health Events
	Sharing of information on development assistance funding schemes and programs.	

2.3.5 Financing Health

OUTPUT	INDICATOR	STATUS AT 2018
Improve equitable allocation of resources	Funding allocation based on well researched health priorities guided by governance principles.	Allocations based on MTEF and issues highlighted through NHA reports. Local budget allocations adjusted accordingly.
	Establish benchmarks for accessibility and affordability for vulnerable groups and annually monitored against these benchmarks.	Consider Vulnerable Group Study was conducted in Samoa in 2005. There is a need to redo this to ensure vulnerable groups have access to health services they need.
	National Health Accounts produced every two years and findings incorporated into health financial decision making by government and healthcare financiers	The most recent version of National Health Accounts iS for FY2014/15. The development of NHA report for FY16-17 is in progress. Data presented in NHA reports is used for decision making and policy development including the forward estimate of budget allocated for areas of priorities in health such as public health and overseas treatment.
Improvement on efficiency, accountability and transparency of the health sector	High standard of performance measures monitored and reported.	Budget versus actual expenditure is continuously monitored by the Corporate Service Division of MOH on daily basis, and regular audits conducted by both internal auditor and Audit office of the government.
	Partner specific performance management system implemented	
	Sector partners specific communication strategy implemented.	The review and update of the Health Sector Communication Strategy that was developed under the Samoa Health Project in 2005 is in the pipeline.
	Evidence of outsourcing and sub-contracting based on performance, efficiency and cost-effectiveness.	Audit reports verify compliance with the government of Samoa probity requirements.
	Audit reports verify compliance with the government of Samoa probity requirements	MTEF1 (2008) and MTEF 2 (2011) completed and the update is on the pipeline to use as a tool to improve health financing.
	Effective contractual relationships between the MOH and partners in place including monitoring systems to ensure safety of practice and most effective/efficient use of financial resources	Contracting processes and Memorandum of Agreements/Understanding have improved with the great support and technical assistance of the Ministry's legal consultant. These contracts and MoAs/MoUs include Terms of Reference with conditions to be met and performance measures.
	Public Feedback	Open door policy
Long-term financing plan for Samoa health sector	Health resourcing policy and action plan developed and implemented led by the Ministry of Health	National Health Account Reports completed up to FY2014/15. Review and update of MTEF is under development.

2.3.6 Donor Assistance

OUTPUT	INDICATOR	STATUS AT 2018
Increased donor participation in health	Evidence of 10% increase in effective donor assistance to the sector	The total donor sources of health expenditure from SAT7,488,162 in 2008/09 to SAT9,404,297 in 2014/15.
	Increased harmonization of donor assistance with government prioritized areas.	The harmonization of health donor assistance was initiated during the Health SWAp program that was officially launched in 2008. All development partners for health are members of the Health Programs Advisory Committee.
	Evidence of country led as opposed to donor led assistance.	In line with SWAp philosophy, development partners have allows Samoa to drive decision-making and these decisions are based on Samoa's Health Sector Plan 2008-2018 priorities.
Increased access and utilization of donor resources under regional and international programs for health programs	Evidence of 10% increase in regional and international programs based on government of Samoa prioritized programs.	Global Fund administered by UNDP for HIV, STI and TB; World Bank contribute to NCD control and prevention; FAT contribute to Primary Health Care through the Samoa-Australia Partnership.
Increased number of stakeholders and donors at health sector meetings.	Evidence of increase in number of stakeholders participating at health sector meetings.	NGOs and private health providers have their representatives in the HPAC meetings, increased participation of stakeholders and partners in Health Promoting Schools Committee meetings, Sexual Reproductive Health Stakeholder meetings, Health policies and Plans development and Review Stakeholder Consultations, decreased participation in Annual Health Sector Forums and Reviews.

2.4 Health Sector's Performance against Key Components of Samoa's Health System:

2.4.1 Health Governance, Leadership and Coordination:

The Health System of Samoa is led, operated and managed on three types of governance. All are founded on legislative framework and they in turn interlink at different levels to ensure that health services for Samoa are effective, efficient and safe. These levels include:

(i) Corporate governance which refers to rules, processes or laws by which organizations are operated, regulated and controlled to improve transparency and accountability;
(ii) Clinical governance which is used to describe a systematic approach to maintaining and improving the quality of patient care within the health system; and
(iii) Professional governance that purports structured and specific sets of competencies and standards that emanate from legislative frameworks which empowers professional bodies to protect the public from negligent and substandard professional practices.

The governance arm of the Health Sector plays a crucial role in regulating and monitoring all health sector partners so that they may achieve expected outcomes and assist in overcoming the challenges of the Health Sector. Health is one of the key priorities of the Government of Samoa which is reflected in the

Strategy for the Development of Samoa FY2016/17 – FY2019/20[17]. The Health Sector Plan 2008-2018 and the Health Sector Plan 2008-2018 mid-term review report in 2013 reflections national health priorities through its strategies with a vision for "A Health Samoa"[18].

One of the strategies of the Health Sector Plan includes governance with the objective to strengthen regulatory, governance and the leadership role of the Ministry of Health.[19]. Governance is also reflected in the Corporate Plan, Annual and Work Plans of the Health Sector. Governance captures the essence of the mission of the Health Sector Plan which is *"to regulate and provide quality, accountable and sustainable health services through people working in partnerships".*[20] Governance may encapsulate many meanings however, **governance** in the context of health includes the following:

a) having a legislative framework in place;
b) having evidenced based policies, standards and a monitoring and regulatory framework;
c) establishing of effective statutory bodies;
d) strengthened partnership with other sectors; and
e) accountability and transparency at all levels.

2.4.1.1 Legislative Framework in Place

There are currently at least 19 Health Acts[21] utilized by the Health Sector today dating back to the Health Ordinance 1959 which continues to be fully utilized today. The Health Ordinance 1959 has seen the birth of many other Acts such as:

(i) Professionals Acts:
a. Allied Health Professionals Act 2014
b. Healthcare Professional Registration and Standards Act 2007
c. Dental Practitioners Act 2007
d. Medical Practitioners Act 2007
e. Nursing and Midwifery Act 2007
f. Pharmacy Act 2007

(ii) Organizational Acts:
a. National Health Service Amendment Act 2014
b. National Health Service Act 2006
c. Ministry of Health Act 2006
d. National Kidney Foundation of Samoa Act 2005
e. Oceania University of Medicine Act (Samoa) 2002
f. Samoa Red Cross Society Act 1993

(iii) Regulations:
a. Food Regulations (2017)
b. Tobacco Regulations (2013)

(iv) Others:
a. Health Promotion Foundation Act 2015
b. Food Act 2015

[17] Ministry of Finance. 2017. *Strategy for the Development of Samoa FY2016/17-FY2019/20*. Apia
[18] a) Ministry of Health. 2008. *Health Sector Plan 2008-2018.* Apia
b) Ministry of Health. 2013. *Health Sector Plan 2008-2018 Mid-Term Review Report.* Apia
[19] ibid. p12
[20] Ibid. p8.
[21] Ministry of Health. 2008. *Samoa Health Legislations Handbook.* Apia

c. Health Legislations Handbook 2008
d. Tobacco Control Act 2008
e. Food and Drugs Act 1967
f. Mental Health Act 2007
g. Narcotics Act 1967
h. TBA Guidelines 2018

The Ministry of Health is the lead agency of the health sector with the main function to monitor and regulate as well as ensure that all health service providers both in public and private health sectors comply with the necessary governance measures that have been outlined above.

2.4.1.2 Development and monitoring the implementation of health policies, strategic plans, professional standards and national health accounts:

Over the ten years of the Health Sector Plan 2008-2018, much work has been done by the health sector in the areas of reviewing and developing health policies, strategic plans, professional standards and national health accounts to guide their work as well as that of the various groups of health professionals to ensure safe practice in health care.

There are twenty (20) health policies endorsed by Cabinet to assist the Ministry of Health and Samoa's health sector in addressing policy issues in the health sector. These include:

Figure 45: List of Cabinet Approved Health Policies from 2008-2018

	NAMES OF HEALTH POLICIES	TIMEFRAME
1	National HIV/AIDS and STI Policy	2017-2022
2	Draft National School Nurse Policy	2018-2023
3	Draft National Non Communicable Disease Policy	2018-2023
4	National Alcohol Control Policy	2016-2021
5	National Patients Grievance and Complaints Policy	2015-2020
6	National Food and Nutrition Policy	2013-2018
7	National Child and Adolescent Health Policy	2013
8	National Health Prevention Policy	2013-2018
9	National Infection Control Policy	2011-2016
10	National Sexual Reproductive Health Policy	2011-2016
11	National Health Promotion Policy	2010-2015
12	National Non Communicable Disease Policy	2010-2015
13	National Tobacco Control Policy	2010-2015
14	Samoa National Medicines Policy	2008
15	National Mental Health Policy	2006
16	National Human Resource for Health Policy and Action Plan	2006
17	Draft National Health Care Waste Policy	
18	National Health Information Policy	
19	Draft National Rheumatic Fever Primary Prevention Policy	
20	Draft Overseas Treatment Policy	2009

Source: Ministry of Health Policies Register (2018)

The Policies are considered to be divided into:

i. *Diseases Policies* would include: NCD, Mental Health, HIV/AIDS, Sexual Reproductive Health
ii. *Medicines and Drugs* would include: Medicines and Drugs, Alcohol Control, Tobacco Control
iii. *Food Policies* include: Food and Nutrition

iv. *Health Promotion and Prevention* would include policies on: Health Prevention, Health Promotion, Primary Health Care, Rheumatic Fever Primary Prevention, Overseas Treatment, Health Care Waste, Infection Control

v. *People Policies* will include: National Child and Adolescent, Human Resource for Health, Patients Complaints and Grievance, Safe Motherhood

Policies currently under review with Drafts in place:

- Overseas Treatment Policy
- National NCD Policy
- National School Nurse Policy
- National Sexual Reproductive Health Policy

Completed Policies include:

- National Mental Health Policy 2006
- National Human Resources for Health Policy and Plan of Action 2006
- National Medicines and Drug Policy and Plan of Action 2008
- National Tobacco Control Policy 2010-2015
- National Non-Communicable Disease Policy 2010 – 2015
- National Health Promotion Policy 2010 – 2015
- National Infection Control Policy 2011-2016
- National HIV/AIDS Policy 2011 – 2016
- National Sexual Reproductive Health Policy 2011 – 2016

As of the time of the review, the following Policies are awaiting TAs to assist with the development:

- National Tobacco Control Policy
- National human Resource for Health Policy

Along with these policies, there were seven (7) health professional services standards developed to guide the work of the different health professions. These include:

Table 17: List of Cabinet Approved Health Professional Services Standards from 2008-2018)

Names of Services Standards
1. Allied Health of Samoa Code of Professional Standards 2010
2. Dental of Samoa Code of Professional Standards 2009
3. Pharmacy of Samoa Code of Professional Standards 2008
4. National Standards for Nursing and Midwifery Practice 2017
5. Medical Practitioners of Samoa Code of Professional Standards 2007
6. Ministry of Health Services Standards 2008 (1st edition)
7. Ministry of Health Services Standards 2014 (2nd edition)

Source: Ministry of Health Plans, Strategies and Standards Register (2018)

Moreover, the Ministry of Health Services Standards was initially developed and implemented in 2008 was reviewed and updated in 2014 to direct the Ministry of Health's stewardship and governance role[22].

Working with health policies, strategies and professional standards, it has become clear to Samoa's health sector that these health documents are essential in providing clarity when dealing with health issues and activities that are critical to health and safety, legal liabilities and regulatory requirements of the work of Samoa's health sector. To the Ministry of Health's end, they try to develop powerful

[22]Ministry of Health. 2014. *Ministry of Health Services Standards 2014.* Apia

solutions to help manage health policies and other health documents in order to improve the productivity and efficiency of health services provisions including healthcare services; health promotion services and health prevention and primordial services; as well as ensuring it is not breaching any health legislations and regulations.

The health sector under the leadership of the Ministry of Health was able to complete two (2) National Health Account reports. These reports are for the financial years 2008-09 and 2014-15. The delay in producing reports for remaining years was due to changes and modification of software that had been used to analyze the data for these reports from time to time.

2.4.1.3 Effective Statutory Bodies:

Professional Boards and Councils are established under legislations such as National Health Service Board pursuant to the National Health Service 2006[23] and the National Kidney Foundation of Samoa Board pursuant to the National Kidney Foundation of Samoa Act 2005. There are seven (7) currently five Health Professional Councils who monitor their respective health professions through professional standards, registration and enforcing disciplinary measures. These include:

Health Professional Councils are the gate keepers of the professionals and are tasked with vetting the knowledge, skills and competence of every person who wishes to be registered in a regulated health profession. Once a person is deemed to have met the specified levels of skills, knowledge and competency required for safe practice as a professional in their field of healthcare, there name is entered into the relevant health professional register by the Health Professionals Registrar.

2.4.1.4 Political Health Advocacy Groups:

Driving the national will in all things, health has been the main focus for Samoa Parliamentarian Advocacy Group for Healthy Living (SPAGHL) and Women in Leadership Advocate for Health (WinLAH). Whilst the latter group made up of Parliamentary and female Chief Executive Officers has titled its focus on empowering women in society, the SPAGHL which was established in 2007 through a collaborative initiative between the Ministry of Health and Cabinet continues to assist in advocating and promoting health related issues particularly Non Communicable Diseases and its contributing factors. This political health advocacy group had also been instrumental in the lobbying of health issues in the Parliament.

2.4.1.5 Endorsement of the Director General of Health Title

In Financial Year 2009-2010, the Cabinet Endorsement (F.K.52) was received to reinstate the title of **Director General of Health** to be in line with Regional and International Health Systems and also the Health Ordinance 1959.

2.4.1.6 Health Coordinating Mechanisms:

The Ministry of Health as the led-coordinating government ministry in health continues to place importance on consultative and coordinating mechanisms and interventions to ensure that a whole-of-country and sector wide interventions are implemented, to drive health messages within the community and households. These have included multiple forums and advocacy programmes integrating all things health whether it is Non Communicable Diseases or Communicable Diseases. Some illustrations include the Annual Health Forums, Samoa-American Samoa Bilateral Health Summits, the Men, Women and Fa'afafine Forums and the Village Health Fares of 2010-2011.

[23] Ministry of Health. 2006. *National Health Service Act 2006*

2.4.1.7 Effectiveness of Health Professional Registrar Position:

The Healthcare Professional Registration and Standards Act 2007 mandated the establishment of the Healthcare Professional Registrar position responsible for ensuring professional councils implemented their roles and responsibilities in accordance with the respective laws.

The establishment of this position was to ensure that registers for all legally mandated healthcare professionals such as Nursing and Midwifery, Medical Practitioners, Dental Practitioners, Pharmacists, and Allied Health Professionals were in place. This position saw for the first time a more cohesive and standardized practice in terms of issuance of practicing certificates for all healthcare professionals to ensure safety to practice.

This also helps in strengthening mechanisms of **"safe professional practice"** through improved oversight of the qualifications that allow entry into the professions; and enforcing accountability through mechanisms that involve the disciplining of errant behavior using Standards of Professional Standards as the accepted measure for ethical and professional behavior have definitely been enhanced.

2.4.1.8 Partnership with other sector partners including other sectors:

Although the Ministry of Health has the regulatory and monitoring roles, they cannot act alone. The importance of collaboration of all public and private health partners is crucial in achieving the objectives of the Health Sector Plan 2008-2018.

To strengthen and enhance communication and networking between the Ministry of Health and the health sector, they were able to conduct the following in the sector plan time period:

a) Public Health Sector Meetings:

In the past 7 years, monthly Public Health Sector meetings were conducted so the different organizations collaborated and shared ideas to help improve and strengthen Samoa's health system. International and regional commitments namely to the World Health Organization (WHO) also played the vital governance role in the health sector. The World Health Assembly is the supreme decision-making body for the World Health Organization with its main function to determine the policies of the Organization. The WHO also assists member countries in relation to funding and resourcing.

b) Annual Health Sector Forums:

Since 2008, Samoa's health sector has been implementing its current Health Sector Plan 2008-2018 aiming at strengthening health service delivery in order for Samoa to become a Healthy Island. One of avenues that the health sector utilized to assess their performance against the Health Sector Plan 2008-2018 is through sector discussions during annual health sector forums every year.

Discussions during annual health sector forums are aiming at:

(i) identifying achievements that are yet to put Samoa on course to achieve all health related Sustainable Development goals and to fully realize Samoa's status in the Healthy Island Concept;
(ii) envisioning what is/are needed for Samoa's health sector to be strengthened to further enhance health services delivery in the next Health Sector Plan's lifetime and
(iii) accelerating the realization of health related Sustainable Development Goals as well as national priorities.

c) Biannual Samoa-American Samoa Health Bilateral Summits:

The first Samoa – American Samoa Health Bilateral Summit was held in American Samoa in October 2010 with the theme **"Celebrating our Success, Challenging our Future".** This was the invitation from

American Samoa Department of Samoa for both countries to share on their public health response on the Pandemic Influenza H1N1 and encourage improvements in disease surveillance systems and response to public health threats.

So far, both Samoas were able to conduct seven summits and it is an ongoing event on bi-annually basis as an opportunity to foster a strong, mutually beneficial relationship between the two Samoas to promote good health and strengthen health systems. It is also an opportunity to foster links that will allow an ongoing exchange of knowledge and ideas in order to promote improvements in health.

As an outcome of this partnership between the two Samoas, both countries are planning to conduct their Lymphatic Filarisis Mass Drug Administration 2018 together at the same time i.e. August 2018.

d) Weekly Public Health Sector Leaders' Meeting with the Hon. Minister of Health:
Public health sector leaders (General Managers of National Kidney Foundation of Samoa and National Health Service, Director General of Health) meet on weekly basis with the Hon. Minister of Health to update the Minister with various developments that take place in the public health sector and to advice on various projects and developments implemented. Some issues discussed include:

(i) development of and practical implementation of health legislations and regulations;
(ii) Development and implementation of health strategic plans, policies and health services standards;
(iii) Safety of professional practice and quality assurance in health care services;
(iv) Human resources for health matters;

2.4.2 Health Services Provision:

Health services provision in the context of health is described as the treatment and management of illness, and the preservation of health through services offered by the medical, dental, complementary and alternative medicine, pharmaceutical, clinical sciences (in vitro diagnostics) nursing and allied health professions. It embraces all the goods and services designed to promote health including "preventive, curative and palliative interventions, whether directed to individuals or to populations. Good healthcare services deliver effective, safe, good quality personal and population-based healthcare to individuals in need, when and where needed, with a minimum waste of resources.

In realizing the mandated responsibilities of the Ministry of Health and the health sector to ensure health service provision is safe, efficient and effective for Samoan people, the following is the summation of all activities and programs that had been implemented by the Ministry of Health and the health sector during the lifetime of the current Health Sector Plan 2008-2018. These achievements are classifieds under three main services provided by the health sector:

2.4.2.1 Healthcare Services:

2.4.2.1.1 Healthcare Professional Registration:

The Ministry of Health under the Office of the Health Professional Registrar successfully screened application for healthcare professional registration for four main professions in Samoa (Medical, Nursing and Midwifery, Dental, Pharmacy). This is to ensure that all healthcare professionals are registered and meet the mandated requirements to get the endorsement to practice in the country. Safety of our general population is the utmost objective for professional registration and credentialing.

2.4.2.1.1 Primary Health Care Service Delivery:

The vision of strengthened primary health care shifts the focus on people and communities to build healthy communities and safe surroundings.

The Ministry of Health and the health sector have for the past decades invested much into building stronger and more resilient health systems and will continue to work on transforming the current fragmented public health system to provide high quality services.

a) Primary Healthcare Centre:

In November 2016, the government of Samoa in partnership with the World Bank, Australia and New Zealand Government officially opened the Samoa Primary Health Care Centre at Motootua. This is the government's initiative to synergize with other health development efforts and planning for the future.

b) **PEN Fa'a-Samoa Program:**

The PEN Fa'a-Samoa is the village demonstration project that adopted the World Health Organization's Package of Essential Non Communicable Diseases Intervention tool that aims at strengthening Non Communicable Diseases detection and management at the primary health care setting through community participation.

To combat Non Communicable Diseases crisis in Samoa, the Ministry of Health in collaboration with the health sector revitalized Primary Health Care through community engagement by utilizing the PEN Fa'a-Samoa model of Care. The PEN (Package of Essential Non-Communicable Disease Intervention) Fa'a-Samoa is the model of care that Samoa is currently use to provide the service to its community to make sure the population gets the health care service they need such as checking blood pressure, Body Mass Index and other measurements at the early stage to address Non Communicable Diseases. This tool was initially introduced and implemented in 2015 piloting two villages one from Upolu (Faleasi'u) and one from Savai'i (Lalomalava). There were approximately 1,568 people from both villages who were screened for Non-Communicable Diseases in the PEN Fa'a-Samoa Program one first year of implementation (2015). Out of 1,568 of people being screened for NCDs, 40% of them were referred to hospital for diagnosis and treatment. At the moment, the number of villages being involved in the PEN-Fa'a-Samoa is increasing from 2 villages in the beginning to 13villages in 2017 with more than 1,000peoplebeing screened for NCDs.

c) Expansion of National Kidney Foundation Services in Savai'i:

The dialysis services provided by the National Kidney Foundation in Samoa were extended to Savaii in 2011 to put an end on dialysis patients in Savaii being relocated for dialysis treatment. This milestone by the National Kidney Foundation of Samoa contributes to Samoa's commitment in achieving universal health coverage indicators.

2.4.2.1.2 Antenatal Care Services:

Within the ten years of the Health Sector Plan 2008-2018 implementation, there has been a slight increase in percentages of births attended by skilled health providers from 81% in 2009 to 83% in 2014.[24] This indicates the improvement in provision of antenatal care services provided by the National Health Service, Private Practitioners and Samoa Family Health Association.

At the community level, the cultural birth service as provided by Traditional Birth Attendants (TBAs) is very much alive as there are mothers who still choose to be birthed by them.

The next step in enhancing primary health care service delivery is to improve the management of health close to homes through posting public health doctors and relevant staff to district hospitals with outreach teams and community based approaches.

[24]Samoa Bureau of Statistics. 2014. *Samoa Demographic and Health Survey.* Apia

2.4.2.1.2 Health Promotion Services:

a) Tobacco Control

The Ministry of Health in collaboration with sector partners conducts various initiatives to raise public awareness of the addictive and harmful effects of tobacco products. Activities included television and radio spots, printed media and consultations with communities and organizations. Educational programs in schools are ongoing and these include implementing of activities on awareness, enforcement and cessation services.

Several ongoing programs include the Integrated Community Health Awareness Program to boost the awareness of the village communities, churches and schools on the importance of tobacco control have been undertaken. Smoke-free Tournament through different sports such as boxing, netball, soccer, touch rugby were also held in conjunction with life skills building of school children to equip them to thrive in classrooms and to accomplish their ambitions. World No Tobacco Day on 31st May every year marks the global crusade to combat the effect of tobacco products.

b) Nutrition, Food Security and Food Safety:

(i) Nutrition-Related Health Situation:

Samoa is currently going through a nutrition and disease transition. There has been a rapid upsurge in nutrition-related chronic diseases such as obesity, heart disease, hypertension, stroke and diabetes in recent years while at the same time under-nutrition and micronutrient malnutrition continue to exist.

The 2013 Samoa STEPS Non-Communicable Disease (NCD) Risk Factor Survey showed high rates of nutrition related chronic disease[25]: 63% of the adult population was obese, 24.5% had high blood pressure and 89.1% was diabetic. These NCDs are increasing and some are even starting to become evidence in children.[26] Non-communicable diseases are the main cause of deaths in Samoa and threaten economic productivity and growth due to premature mortality and morbidity.

Under-nutrition and malnutrition persist in young children. The prevalence of malnutrition was high in the 1970s but declined by 1999 and the rates in children below five years of age were described as low.[27] Recently however, there appears to be an increase show from 2006 to 2010, the number of malnourished children from the age group of 0 – 2 years admitted to TTM hospital, was increased from 21 to 46. Malnutrition is often linked to poor infant and young child feeding, difficult social circumstances and poverty.

***(ii) Breastfeeding*:**

Breastfeeding is recommended as the best way to feed infants and young children. To fully protect infant health mothers are encouraged to exclusively breastfeed for six months, introduce complementary food at six months and continue breastfeeding for 2 years and beyond. These recommendations are being met in Samoa. In 2014, 86% of infants were exclusively breastfed to 6 months and 66% of children 6-23 months were fed in accordance with infant and young child feeding instructions.[28] These problems will be contributing to malnutrition and NCD issues in Samoa.

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[25]Ministry of Health and World Health Organization. 2013. *Samoa STEPS Non-communicable Disease (NCD) Risk Factors Survey Report 2013.* Apia

[26]McGarvey, S.T. et al. 2007. *Nutrition and health in modernizing Samoans: temporal trends and adaptive perspectives.* Cambridge University Press, Cambridge

[27]Mackerras, D. 1999. *Samoa National Nutrition Survey.*

[28]Samoa Bureau of Statistics. 2014. *Samoa Demographic and Health Survey Report 2014.* Apia

(iii) Food Supply:

There has been a significant increase in the amount of food available to Samoan population over the last 40years.[29] Imported foods now make up the majority of Samoa's food supply.[30] This is not only a food security risk but also has a negative effect on dietary patterns and feeding practices because many imported foods are lower nutritional quality than fresh local foods.

c) Alcohol Control:

The Samoa second NCD Risk Factors survey in 2013 showed that alcohol consumption is much higher in men. 18.8% of men were current drinkers during the time of the survey compared to 2.2% of women.[31] Moreover, men were also more likely to drink more frequently and drink more heavily.

To monitor and control alcohol consumption in Samoa, the health sector in collaboration with its sector partners, has primary responsibilities towards ensuring there are effective public policies to reduce the harmful use of alcohol. A substantial scientific knowledge base exists for policy-makers on the effectiveness and cost-effectiveness of the following strategies:

- ✓ Regulating the marketing of alcohol beverages (in particular to young people)
- ✓ Regulating and restricting availability of alcohol
- ✓ Enacting appropriate drink-driving policies
- ✓ Reducing demand through taxation and pricing mechanisms;
- ✓ Raising awareness and support for policies
- ✓ Providing accessible and affordable treatment for people with alcohol-use disorders; and
- ✓ Implementing screening programs and brief interventions for hazardous and harmful use of alcohol.

The National Alcohol Control Policy 2017-2022 is in place with proposed interventions that would help the Ministry of Health and the health sector in reducing the risks of consuming too much alcohol.

d) Physical Activity Initiatives:

(i) Political Level:

The Samoa Parliamentary Advocacy Group for Healthy Living (SPAGHL), made up of parliamentarians and four heads of government departments, with the Hon. Speaker of the House as the chair in advocating healthy lifestyle for the people of Samoa to follow. They were active in policy decision making with support to establish the Health Promotion Foundation for Samoa. They conducted aerobics and other forms of exercise twice a week since their establishment, and creating challenges for workplaces to initiate their own activities. The latest focus of this group is childhood obesity and the ongoing push to implement the Health Promotion Foundation.

Women in Leadership Advocacy Group was also established under the umbrella of the Ministry of Health and led by all women leaders in 2013. Initiating by the female politicians and one of them who is now the Deputy Prime Minister, Hon. Fiame Naomi and all other women leaders, WINLA had been organized health programs targeting women and young females at the time. During the National Health Week, WINLA initiated the half day sports day which is now an

[29]Food and Agriculture Organization. 2009. *The Evolution of Samoa's Food Supply Situation: Trends over the past 40 years based on Analysis of Food Balance Sheets.* National Food Summit. Apia

[30]FAO. 2011. *Samoa's Food Country Profile.* Apia

[31]WHO et al. 2014.*Samoa NCD Risk Factors STEP Survey Report.* Apia

ongoing program for the health week every year. The main purpose of the group is to empower women to become champions and leaders in every aspect.

The Village Health Fair founded on Whole of Country, Whole of Government, One Health concept which covered all of Samoa was initiated in 2011 to present the ideal opportunity to advocate to each village through the matais and church leaders the importance of physical activity in line with other factors in reducing NCDs, was the SPAGHL supported initiative.

(ii) **Community Empowerment:**

The Ministry of Health took the lead in initiating the village Level Physical Activity Program in 2010 involving organizations within different villages to carry out aerobics sessions for the surrounding community to enjoy together and become pro-active about their health. The "Prime Minister's Challenge" to the Minister of Health and the Director General of Health asked the Ministry of Health to evolve the start of national aerobics competition for all the organizations in the physical activity program as an incentive to maintain ongoing participation.

Under the Health Sector SWAp program, a small grants scheme to support active organizations improve their physical activity program started in 2009 and this was completed in year 2013.

The "Workplace Physical Activity Program" was launched with a six months competition that is to end on 10th December 2011 facilitated the engagement of all workplaces within the urban areas. The workplaces are monitored on several criteria set to establish their physical activity, health check and health education system in place. Prizes were given to the most devoted workplaces and in this matter the hope for more workplaces to join and promote ongoing sustainability and growth of physical activity in these environments.

Aerobics and siva fa'amalositino were carried out in front of the government building and out to the community during special commemorative events like annual National Health Week, Teuila Festival and Annual World Health Events. The National Healthy Week on the second week of November every year ends with a half day on the Friday for all public servants to participate in physical activity programs that they organized individually or in groups. This demonstrates political commitment to support and enhanced participation in physical activity. Currently the workplace physical activity program is guided by the Healthy Workplace Guidelines which was launched in 2015.

(iii) **Public Awareness and Communication:**

Television advertisements and radio programs are used constantly to define the importance of physical activity together with nutrition, advocacy against tobacco and alcohol use to help reduce and reverse the NCDs prevalence in Samoa.

Pamphlets, posters, banners and billboards are some of the promotional materials used to raise awareness about physical activity. Public engagements are inspired by the former Manu Samoa rugby players who had been contracted as physical activity advocates and two of them are now becoming permanent staff of the Ministry of Health as health advocators for different areas of health that need advocacy programs.

2.4.2.1.3 Health Prevention Services:

a) Injuries:

Deaths and disabilities due to injuries result in significant social and economic costs to individuals, families, communities and healthcare systems.

At the national level, Samoa's health sector recognizes injuries as one of the top four priority health challenges identified in the Health Sector Plan 2008-2018.

The burden of injuries on the Samoan population and healthcare system is becoming increasingly obvious. Injuries have risen from the seventh leading underlying cause of death in the year 2007/08 to five in the year 2017/18. A dramatic jump to becoming the leading underlying cause of death for the year 2009/10 reflected the tsunami disaster which struck in September 2009, and illustrated the importance of mitigating death and disability from injuries in natural disasters, through ensuring systems are in place to respond effectively. Injuries remained in the top ten leading causes of hospitalization in Samoa at the moment.

The profile of those vulnerable to injuries in Samoa show the children and youth are the most at risk. In 2010, 24% of injuries presenting for hospital intervention occurred within the age group of 5 – 14 years representing the highest of all age groups, followed by 20% for the age group of 15 – 24 years. Males account from more than three times the injuries compared to females. The most common types of injuries in Samoa are caused by drowning, and road traffic accidents.

This represents a significant cost to Samoa's current and potential economic productivity including the huge social costs borne by families through the early loss of life of a loved one.

Injuries as a largely preventable public health problem, are resulting in avoidable death and disability, and represent significant avoidable costs to healthcare.

National Injury Prevention Efforts:

The prevention of injuries whether accidental or intentional by cause, is a cross-cutting issue across several sectors and players.

In Samoa, the prevention of injuries due to rad traffic accidents is the main objective of the National Road Safety Committee. The committee is chaired by the Ministry of Works, Transport and Infrastructure, with membership from the Ministry of Health, Education, Finance, Police, Land Transport Authority, Chamber of Commerce and others. The set up allows a collective approach that maximizes resources and harmonizes activities by different players. Positive developments include the launch and implementation of the National Action Plan for Samoa Road Safety, in tandem with the UN Decade of Action for Road Safety 2011-2020. This plan of action continues and intensifies the committees many prevention activities carried out over the years.

In the areas of injuries due to violence, especially domestic violence and sexual abuse, the civil society or NGO side of the health sector plays a crucial role with several providing services to women, children, youth and other vulnerable groups exposed to domestic violence and abuse. The Ministry of Women, Community and Social Development has taken a lead role in the coordination of national response, in close collaboration with the health and education sectors. Samoa's ratification of the United Nation's Conventions on the Elimination of Discrimination against Women (CEDAW) and on the Rights of the Child (CRC) and subsequent monitoring and development efforts are expected to make an impact on prevention of injuries, especially amongst women and children. Another positive development in this area is the Family Safety Act in 2013.

An area that needs strengthening is prevention of child injury in the homes. This needs cooperation with families and the communities to lessen these types of injuries.

Samoa's documented high rates of suicide due to paraquat poisoning and hanging in the past decades highlight intentional self-injury as a major area for address. One of the positive

developments in response to this has been the national clamping down on availability and accessibility of agents such as paraquat.

Injuries as a public health concern highlights the need for strengthening partnership with other sectors, including the NGOs and private sector, religious and community leaders.

b) Water and Sanitation:

The water and sanitation sector in Samoa is one of the fourteen (14) key sectors under the government planning initiative and has come a long way in terms of development and realization of its key objectives. The sector is one of the priority sectors in Samoa, as it directly impacts on the quality of life and health of the people and overall productivity of the population. Access to clean water and sanitation sustainability are among the key outcomes emphasized by the Strategy for the Development of Samoa for Financial Years 2016-17 to 2019-2020, which is the national government framework for ensuring an enabling environment for economic development and social transformation.

There have been major developments in the Sanitation sub-sector which include the establishment of the Sanitation Unit within the Ministry of Health and the development of the National Sanitation by the PUMA under Ministry of Natural Resources and Environment, which was approved by the Cabinet in 2010. The total of 106 Primary Schools and 3 District Hospitals were targeted under the Sanitation Program funded by the WaSSP Sanitation Works Program. Apia Wastewater Treatment Facility was officially opened in 2009.

The Water and Sanitation Sector Plan 2012-2016 continues to guide water and sanitation developments through the framework for action as follows:

(i) To strengthen sector's governance framework to guide and sustain sector developments;
(ii) To improve watershed management and reliability of water resource data through integrated resource management;
(iii) To increase access and improve provision of reliable, clean and affordable water supplies;
(iv) To improve surveillance of drinking water quality and water borne diseases;
(v) To increase access to basic sanitation, improved waster systems and improve hygiene practice;
(vi) To strengthen effectiveness of flood mitigation measures to reduce incidence and magnitude of flooding in the Apia urban area.
(vii) To secure sustainable water resources management
(viii) To increase access to safe and reliable water supplies
(ix) To maximize the benefits of other water uses (non-water supply) and
(x) To improve sanitation, drainage and wastewater treatment and disposal.[32]

The role of the Ministry of Health Water Quality Unit is to regulate and monitor drinking water quality for safety and provide policy and technical advice on water safety issues which impact on the health of the population. The Health Ordinance 1959, Food & Drugs 1967 and the National Drinking Standards 2008 & 2016 are the key documents which guide the work of the unit.

There are currently two different monitoring programs addressed in the Pacific Framework for action on drinking water quality. These are the National Regulatory Based Monitoring tools which apply to Samoa Water Authority, Health Sector and Bottle Water companies as well as community based monitoring for Independent Water Schemes (IWS). This system of community based monitoring for Independent Water Schemes involves a public health risk management approach in dealing with poor water quality by identifying poor water quality and risks posed on the schemes as

[32]Ministry of Natural Resources and Environment. 2012. *Water and Sanitation Sector Plan 2012-2016*. Apia

well as proposing ways to mitigate those risks. This approach also involves awareness campaigns and programs on ways to protect and keep water safe, such as encouraging "Boiled Water for drinking" until such time the water scheme is upgraded or rehabilitated and able to provide water that meets established drinking water standards.

The Ministry of Health collaborates with the Scientific Research Organization of Samoa (SROS) to conduct water quality tests for all bottled water companies operating in Samoa.

c) Food Safety:

Foodborne disease and food contamination are significant public health problems in Samoa, and they are growing in importance. These diseases are not only a public health problem but also harm Samoa financially.

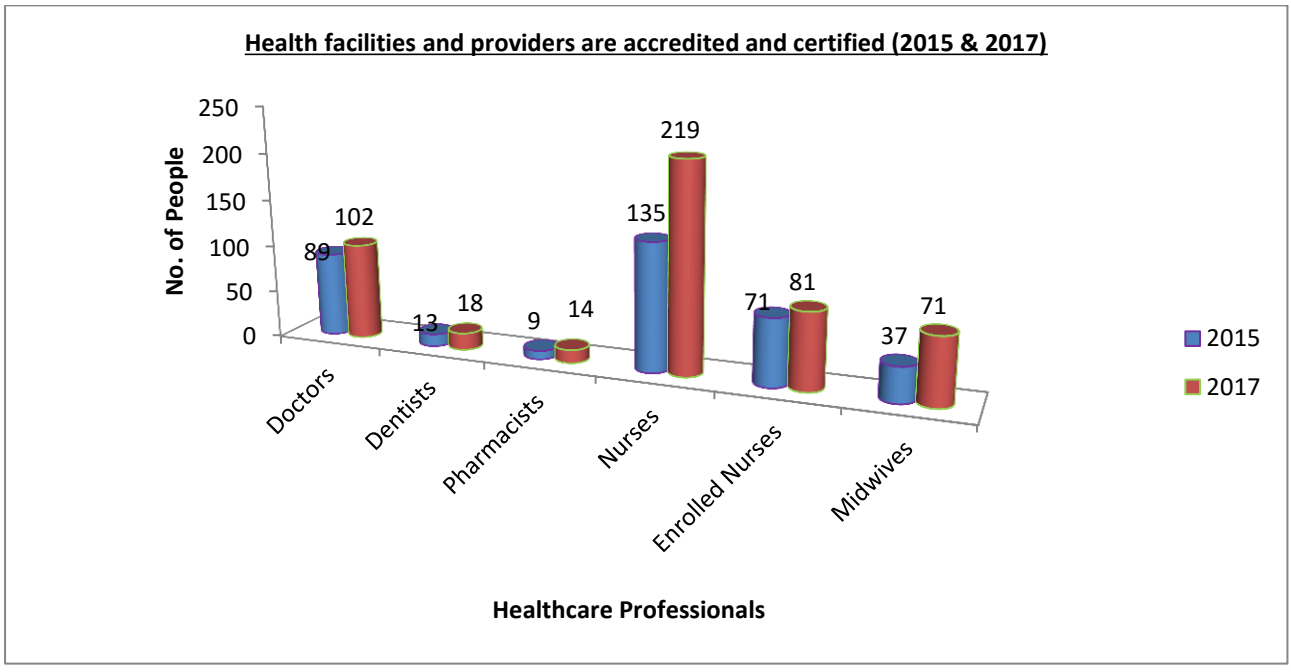
The Ministry of health has monitoring and regulator roles to monitor the food safety and sale. These functions are mandated under the Health Ordinance 1959, Ministry of Health Act 2006 and the newly approved Food Act 2015. This food legislation strengthens the national food control system and improves collaboration with other stakeholders to support the effective implementation of the system.

2.4.3 Human Resources for Health:

A well performed health workforce is one which works I ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances i.e. there are sufficient numbers and mix of staff, fairly distributed, they are competent, responsive and productive.

The healthcare workforce of Samoa's health sector has been gradually increased from time to time since 2008. This might be the usefulness of having national human resources for health policy in place to address human resource challenges faced by the sector and at the same time provide possible strategies that contribute in overcoming these challenges.

By the year 2017, the health sector was able to have the following various healthcare workers in place to provide healthcare services for the country.



The graph above indicates that the numbers of healthcare workforce by various professions are gradually increasing.

2.4.3.1 Health Targeted Scholarships & WHO Fellowships:

One of the reasons is because under the Government Scholarship Scheme, more opportunities were given to the health sector to identify their human resource priority areas that needs to be considered and there is an increase in numbers of health workforce under this scheme to enhance their skills through health targeted scholarship under this scheme as well as the World Health Organization fellowship program.

Moreover, the majority of the health workforce from both clinical and non-clinical was blessed with opportunities to go for overseas trainings for capacity building under the health sector SWAp program since the beginning of the program.

2.4.3.2 Pacific Open Learning Health Network:

Pacific Open Learning Health Network is a program created by the World Health Organization as a response to Pacific Island Countries Human Resources for Health concern. This program had contributed to improve skills and knowledge among health professionals who can as a result deliver better health services in Samoa.

2.4.3.3 Health Sector Career Talk Program:

Even though there is increase in numbers of healthcare workforce every financial year since 2008, the apparent insufficient supplies of health workers in Samoa's health system at the moment, is the one of the challenges faced by the health sector given the fact that the current workforce cannot meet the health demands of the population. This is the rationale behind the development and conduction of two health sector career talk programs in 2016 and 2017 after the review of the Human Resources for Health Policy 2008 in July 2016 targeting students in colleges and secondary schools.

The overarching goal of these programs were to market current available health academics and vocational programs for them to considered if they are interested to work for health in the future. The outcome of these programs indicates that 96% of participated students from secondary schools and colleges are interested to work for health in the future.[33]

2.4.4 Health Financing:

2.4.4.1 Financing of Health Sector Programs and Activities:

Given the continuous trends of an imbalance between primordial prevention (wellness) and management of diseases (ill health), the economics of this imbalance also continues to climb in monetary terms. As a health sector driven by the need to ensure that there is a healthy and a happy Samoa, the need to look at how strategies over the years were addressed financially to cope with the various health needs have been unavoidable.

For the health sector to articulate this imbalance, the development of National Accounts in 1998 as a tool to identify policy issues in terms of health expenditure have been developed biennially till 2008-2009 and annually starting on financial year 2014-15. The tool was initially introduced under the Samoa Health Sector Management Project funded under the World Bank local facility and Samoa was the first Pacific Island Country to institutionalize the tool which has aided planning in terms of decision making for budgeting processes. In 2010, the World Health Organization introduced the new tool namely Systems of Health Account (SHA) to develop National Health Account and this is still valid until now. One of the most

[33]Ministry of Health.2016 & 2017.*National Health Sector Career Talk Program 2016 & 2017.*Apia

pertinent issues that the National Health Account has been able to articulate is our population's readiness to pay high fees either in kind or monetary to traditional healers compared to hospital fees. This issue continues to challenge health policy developer in terms of health financing and the rising costs of health care.

The limitation in availability of resources to a Pacific Island country like Samoa has prompted the Ministry of Finance to redirect its focus from an output-based budgeting mechanism to a more outcome focused one for all the government ministries including corporations. This is to ensure that finances ae managed effectively in achieving outcomes that contribute to strategic issues which impact on the overall welfare of the general population.

The role of the Ministry of Health since 2006 as a newly established entity, has since changed from that of an implementer of services to a regulating authority not just for the public health services but that of the whole health sector inclusive of the private health sector. With this new role in place mandated under the Ministry of Health Act 2006, having the right mechanism and tool in place to further articulate and to fully realize the Ministry's role and mandate has been a challenge financially and strategically. Capacities are forever tested as we try to keep up with the changes in the global economy.

The birth of the Sector Wide Approach Programme is and has been Samoa's answer to its health sector in facilitating donor assistance in a more harmonious way as also supported by the Paris Declaration on Aid Effectiveness March 2005.

Given this role of the Ministry as the leading authority for health, the need to focus on indicators that are outcome based became more and more apparent given the development and implementation of the Health Sector Plan 2008-2018. The SWAp program for the health sector had been the opportunity for the private health sector to be financed in terms of programs and trainings and further consolidated government's vision to also develop the private sector. Although the original intention was to have all the donors as pooled partners, only AusAID, NZAID and the World Bank agreed to have their funds pooled. The financial process for procurement of goods and services for this arrangement are dictated by the World Bank guidelines. Other donors although categorized as no-pooled partners still maintained their commitment to financing health sector programmes and trainings both long term and short-term such as the World Health Organization, Global Fund, SPC and UNFPA to name a few.

With accountability and transparency as the key phrases of this era, the Monitoring and Evaluation Operational Manual was developed in 2011 collaboratively by the health sector so that financing is well aligned to the indicators agreed to as a sector. These indicators are the result of extensive research and consultations in identifying the real needs of Samoa as a population and working towards reversing the identified trends of obesity, hypertension and so forth.

These indicators are also anticipated to direct how financing is mapped out in terms of resource envelopes needed to implement these indicators. The introduction of the Medium Term Expenditure Framework tool collaboratively also by the Health Sector in 2009 further strengthened financing into the future for the Health Sector. According to the World Bank's Public Expenditure Management Handbook published in 1998, ***The*** MTEF consists of a top-down resource envelope, a bottom-up estimation of the current and medium-term costs of existing policy and, ultimately, the matching of these costs with available resources in the context of the annual budget process.

The first edition of the MTEF costed the Health Sector Plan 2008-2018 and the opportunity was given to the private sector to submit proposals for funding based on the strategies identified by the health sector plan as criteria for funding. The second edition of the MTEF which was launched had expanded its focus to include majority of available resources from other non-pooled partners. Having this in place gives us

an idea what the resource envelope is for the health sector and will further strengthen our planning and projections into each financial year.

The health sector continues to look at ways to finance health needs into the future as our population continues to grow. Statistics also state that Overseas Treatment Medical Scheme costs continue to rise at an alarming rate.

2.4.4.2 Health Sector Wide Approach Program Implementation:

More than a decade ago, the World Bank and other donors proposed a new way of working with developing country governments to overcome inefficiencies, lack of government ownership, and a number of other problems that were constraining the impact of international support to developing countries like Samoa. This new approach, eventually called **Sector-Wide Approach (SWAp),** embraced many of the principles of harmonization and alignment that were later endorsed by the Paris Declaration on Aid Effectiveness in 2005 and subsequent international meetings. This is defined as the World Bank as a locally-owned program for a coherent sector in a comprehensive and coordinated manner, moving toward the use of country systems. This approach (SWAp) represents the shift in the focus, relationship and behavior of donors and governments. They involved high levels of donors and country coordination for the achievement of program goals, and can be financed through parallel financing, pooled financing, general budget support or a combination. The SWAp approach highlights the evolving partnership between governments and development partners, coalescing around their joint support of nationally-defined programs and focus on results.

For Samoa Health Sector-Wide Approach program (SWAp), it was a process in which funding for the sector whether internal or from donor supports a single policy and expenditure framework, under government leadership, and adopting a common approach across the sector. It was viewed by the Ministry of Health as a means to link budget or resources to strategic priority areas for targeted sector development.

The institutional development objective of the Samoa Health SWAp was to improve the effectiveness of the government of Samoa in managing and implementing the Health Sector Plan 2008-2018 using results from sector performance monitoring. The program's objective in the medium-term (FY2009-2013) is to improve access to, and utilization of effective, efficient and quality health services, to improve the health status of the Samoa population.

The partners responsible for financing the Health SWAp are the government of Samoa, New Zealand Agency for International Development (NZAID), Australian Agency for International Development (AusAID) and International Development Association (IDA).

Consistent with the Health Sector Plan 2008-2018 and health sector partners' corporate plans, the SWAp program had three components. These include:

(i) Health Promotion and Prevention;
(ii) Enhance quality health care service delivery; and
(iii) Strengthening policy, monitoring and regulatory oversight of the health system.

The coordinating division (Health Sector Coordination, Resourcing and Monitoring Division) was set up with the Ministry of Health to coordinate and monitor the implementation of the program. A Health Sector Program Advisory Committee that is chaired by the Ministry of Finance was the decision making entity for SWAp and it is represented by the development partners and key health stakeholders. The joint partnership agreement was established between the World Bank, NZAID, AusAID and the government of Samoa on financing of the Health SWAp program. The Medium Expenditure Framework was in place which developed the rolling program of work for the 5-year program. The Health Sector Monitoring and Evaluation Operational Manual 2011 provided the basis for indicating and measuring

progress and performance on all efforts by the effort in achieving its overarching goal, "A Healthy Samoa".

In the formulation of the program, critical areas of high risk to the success of the program were identified. These include:

(i) Procurement delays which resulting in slowed implementation and
(ii) Conflict between health sector entities over evolving responsibilities and accountabilities.

The implementation of the program had experienced these risks while identifying additional issues and challenges and financial management and programming were additional issues.

2.4.5 Health Information:

Health information remains one of the major challenges faced by the health sector since the beginning of the current sector plan's implementation in 2008. Providing accurate data and information to provide baseline data and progress for the current sector plan's outcome and indicators was so difficult as the information systems used at that time i.e. Patient Information System (PatIS) and Community Health Nurse Information System (CHNIS) did not function properly.

2.4.5.1 Health Sector e-Health Project

Because of this long overdue difficulty in the sector, the e-health project was proposed and approved by the government to be funded under Asian Development Bank with the aim to enhance Samoa's health sector information system. This project is in its planning stage, and it is expected to be fully realized in the next sector plan of the health sector. It is hoped by having e-health project up and running, it will benefit Samoa's health sector in terms of having:

a. Health record always available
b. Evidence based care pathways
c. Structured documents
d. Active and passive decision support
e. Monitoring devices and integration
f. Early warning systems
g. Electronic order entry and results
h. Tracking – Patients, Staff, Equipment
i. Communication and
j. Business intelligence and analytics

It is expected from this project that in the near future, e-health will have a positive impact on every individual such as:

(i) Patient centric focus
(ii) Improvement in the executive commitment on health information management
(iii) Strengtheing strong top-down clinical management
(iv)Great involvement of clinical staff and
(v) Transformation of the health workforce to be more patient-oriented.

2.4.6 Health Medical Products & Infrastructural Developments:

2.4.6.1 Health Infrastructural Development

The health sector's performance in terms of developing and improving health infrastructure during the ten year lifetime of its current sector plan is highly commendable. With the assistance of health development partners such as World Bank, Australia DFAT (AusAID), New Zealand MFAT (NZAID) under the Health Sector Wide Approach Program, the health sector was able to:

(i) Build the new TTM Hospital
(ii) Build the new Headquarters for the Ministry of Health
(iii) Build new health centres (Faleolo and Avao)
(iv) Build the new Pharmaceutical Warehouse
(v) Build the new Orthotics and Prosthetics Workshop
(vi) Build the new Primary Health Care Centre
(vii) Upgrade the MTII Hospital in Savai'i and
(viii) Relocate two district hospitals (Sataua District Hospital in Savai'i and Poutasi District Hospital in Upolu).

Furthermore, other sector partners like the National Kidney Foundation of Samoa and the Samoa Family Health Association were able to build their new centres for Savaii to cater for the health demands of the population residing in the big island.

2.4.7 Climate Change and Health & Disaster Management:

2.4.7.1 Climate Change and Health:

The significant impact of climate change on health is because it affects the fundamental requirements for health i.e. clean air, safe drinking water, sufficient food and secure shelter. It has an exacerbating effect on many existing health problems such as safe drinking water, sanitation, food safety, and risk of increased illness and death from diseases and conditions which are already of much concern, such as dengue, diarrhea, malnutrition, cardiovascular and respiratory conditions and mental disorders.

Samoa as a small island developing state is particularly vulnerable to the effects of climate change. Children, especially those living in poor socio-economic conditions are amongst the most vulnerable to health risks. Health effects of climate change are also expected to be more severe for elderly people and those with pre-existing medical conditions.

Samoa had reacted quickly and able to develop and implement its Climate Adaptation Strategy for Health coordinated by the Ministry of Health as a move to integrate climate risk and resilience into national health sectoral development planning, policies and strategies when the health sector recognized climate change as one of its specific area of focus during the mid-term review of the Health Sector Plan 2008-2018 in 2013.

Various public health services retained under the Ministry of Health such Water Quality, Sanitation, Food Safety, Health Education & Promotion, Nutrition as well as Disease Surveillance and Response, maintain core responsibilities with obvious links to climate change and Health Risks monitoring and reduction.

2.4.7.2 Disaster Management:

Over the years, Samoa have been exposed to extreme situations ranging from Cyclones such as Evans which affected our agricultural sector enormously, a H1N1 scare which took us back to the 1918 Influenza experience, a catastrophic tsunami generated by a 8.9 magnitude earthquake in 2009 and Cyclone Gita in 2018. The impacts of these disasters on our economy and our social environment had been tremendous. As a country, it has taken us years to restore infrastructures, agricultural sectors and the emotional agony that stuck with us due to the magnitude of these disasters.

Disasters preparedness has therefore become one of the government's priorities given our vulnerabilities as stated. For Samoa to better prepare them for the expected and unexpected, a National Disaster Management Act 2007 was passed by the Parliament to further consolidate the efforts by the Ministry of Natural Resources and Environment in collaboration with all response agencies. In addition, the National Disaster Management Plan was also development to complete the law in place and further elaborate on roles and responsibilities of each response agency. Structures are now in place to fully management

implementation for ongoing preparedness during and after any disaster of any magnitude. The structure was based on the DMO and Disaster Advisory Committee forming the focal point for coordination and implementation of all disaster mitigation, preparedness, response and recovery programmes and activities, as advised by the DAC. During disaster response, DAC coordinates and manages response activities from the National Emergency Operations Centre and reports to the NDC for direction and decision making as required.[34]

This structure to date is being used for all communications with all response agencies. The Disaster Management Office of the Meteorological Division of the Ministry of Natural Resources and Environment is responsible for manning and coordinating all matters pertaining to disasters in Samoa. This arrangement has been efficient and effective in mobilizing all the response agencies during and after disasters of any magnitude.

The Health Sector in particular has been able to effectively dialogue over the years in addressing gaps in implementation hence a consultant was hired in 2008 to develop a Disaster Response Plan for the National Health Services to reflect its new mandated roles and the National Kidney Foundation of Samoa which was funded by SWAp. The nursing symposiums that have been held annually given that this is the largest number of health professionals have never been missed having disaster as one of its presentations to continually facilitate understanding of its workforce on the response phases during a disaster. In addition, drills had been done to further identify weaknesses in the systems so that we can better respond as a sector.

[34]Ministry of Natural Resources & Environment DMO. 2006. *National Disaster Management Plan 2006.* Apia

3.0 OVERALL SUMMARY OF HEALTH SECTOR'S PERFORMANCE

3.1 Overall Summary of Health Sector's Performance against National Health Indicators under SDS FY2016/17 – 2019/20 Key Outcome 6

The table below summarizes the overall performance of the health sector against the strategic outcomes and indicators highlighted in the Strategy for the Development of Samoa 2016/17 – 2019/20 specific key outcomes for health.

Table 9: Overall Health Sector Performance against SDS Key Outcome 6 Strategic Outcomes and Indicators

SDS Key Outcome 6 Strategic Outcomes	Indicators	Baseline	Progress	Status
1. Health Promotion, protection and compliance improved.	Prevalence of alcohol drinkers reduced by 5%.	29.3% (STEP Survey 2002)	16.9% (STEP Survey 2013)	**Achieved**
	Prevalence of smokers reduced by 5%	40.4% (STEP Survey 2002)	27.1% (STEP Survey 2013)	**Achieved**
	Number of physically active people increased by 5%	32.6% (STEP Survey 2002)	61.1% (STEP Survey 2013)	**Achieved**
2. Primary Healthcare improved.	Infant Mortality rate reduced.	15.6 deaths per 1000 live births (Census 2011)	18.6 deaths per 1000 live births (Census 2016)	**Not Achieved**
	Maternal Mortality Rate	40.2 per 100,000 live births (Census 2011)	51 deaths per 100,000 live births (Census 2016)	**Not Achieved**
	Population screened for early Non Communicable Diseases detection and diagnosed.	23,302 people screened from 138 villages (Village Health Fair 2010)	Additional 1,568 people already being screened in 2 villages (PEN Faa-Samoa 2015) Additional 1,126 people already been screened in 5 villages (PEN Faa-Samoa 2016) Additional 1,033 people screened in 7 villages (PEN Faa-Samoa 2017)	**Achieved**
3. Safety/Quality of Healthcare Services	Number of health professionals increased:	Doctors = 89 Dentists = 13 Pharmacists = 9 Nurses = 135 E/Nurses =71 Midwives = 37 (MOH 2015)	Doctors = 102 Dentists =18 Pharmacists =14 Nurses = 219 E/Nurses =81 Midwives = 71 (MOH 2018)	**Achieved**
	Patient sent overseas for treatment reduced by 5%	307 patients (NHS OVT Report FY2014-15)	167 patients (NHS OVT Report FY2015-16)	**Achieved**
	Waiting time in emergency department, general outpatient, triaging	<1 hour = 15% 1-2 hours = 25% > 2 hours = 57%	<1 hour = 5.6% 1-2 hours = 32.4% > 2 hours = 61.9%	**Not Achieved**

SDS Key Outcome 6 Strategic Outcomes	Indicators	Baseline	Progress	Status
	reduced.	**(MOH QA Report 2012)**	(**MOH QA Report 2017)**	
	100% compliance of healthcare workers with professional standards.	Average for all healthcare professionals = 89% **(MOH 2016)**	Average for all healthcare professionals = 93% **(MOH 2017)**	**Achieved**
	Health information system implemented.	PatIS Information System (2009)	E-Health project is in its designing phase awaiting the hiring of the Contracting Firm	**Partially achieved**
	Access to health products and services increased.	n/a	-	**Not achieved**
4. Management and response to disasters, and emergencies and climate change improved.	100% compliance with disaster and climate resilience plans	Not defined	Resilient plans were developed and distributed to health facilities in 2017. Implementation and compliance of health facilities with these plans will be realized in the new Health Sector Plan. (MOH, 2018)	**Partially achieved**

By July 2018, the health sector was able to achieve 7 out of 13 (54%) indicators under the four strategic outcomes of the SDS as shown in Table 9, 2 out of 13 (15%) indicators is progressive and 6 out of 13 (31%) were not achieved. The Ministry of Health and health sector continues to work in collaboration to improve their performance against the indicators that are partially achieved and not achieved in the remaining two years of the Strategy for the Development of Samoa FY216/17 – 2019/20 (i.e. FY2018/19 & FY2019/20).

3.2 Overall Summary of Health Sector's Performance against the 7 Key Outcomes of the Health Sector Monitoring & Evaluation Framework 2011

Figure 44: Summary of Health Sector's Performance against the 7 Key Outcomes of the Health Sector Monitoring and Evaluation Framework 2011

Key Outcome 1:	Improved healthy living through health promotion and primordial prevention				
Indicators	**Baseline**	**Target**	**Interim Measure**	**Progress**	**Status**
Prevalence of current alcohol drinkers	29.3% (STEP Survey 2002)	26.5% decrease	16.9% (STEP Survey 2013)	12.4% decrease	**Achieved**
Prevalence of current smokers	40.3% (STEP Survey 2002)	20.15% decrease	27.1% (STEP Survey 2013)	13.2% decrease	**Partially achieved**
Prevalence of people who are physically active	32.6% (STEP Survey 2002)	95% increase	61.1% (STEP Survey 2013)	28.5% increase	**Partially achieved**
Proportion of population who eat at least 2 – 3 servings of fruits and vegetables per	31.9% women, 33.3% men (STEPS 2002)	50% decrease by gender	6% women & 16% men consuming 3+ servings per day (SDHS 2014)	Women – 25.9% decrease Men – 17.3% decrease	**Not Achieved.**

day.					
Key Outcome 2:	**Improved prevention, control and management of chronic diseases (NCD)**				
Indicators	Baseline	Target	Medium Term	Progress	Status
Prevalence and incidence of diabetes		25-50% decrease (Prevalence of 16.1 – 10.75%)	24.3% (STEPS 2013)	2.8% increase	**Not Achieved**
Prevalence of hypertension	Prevalence: 21.2% (STEP Survey 2002)	40% decrease (12.7%)	Prevalence: 24.5% (STEPS Survey 2013)	3.3% increase	**Not Achieved**
Prevalence of overweight and obesity.	Prevalence: Overweight 85.6% Obese 56.0% (STEP Survey 2002)	25% decrease (63.9%)	Prevalence: Overweight:89.1% Obese: 63.1% (STEP Survey 2013)	Overweight – 3.5% increase Obese – 7.1% increase	**Not Achieved**
Prevalence and incidence of rheumatic heart disease	Number of cases: 115 (NHS RHD 2011)	90% compliance 100% school children screened Incidence 75% decrease	Number of cases: 54 new cases (NHS RHD 2016)	New cases – 61% decrease	**Partially achieved**
Prevalence of cancer (2-3 most common types)	Number of admission: Lung cancer: 13 Breast Cancer: 12 Stomach Cancer:12 (MOH 2008)	Not defined	Number of admission: Lung cancer: 26 Breast Cancer: 19 Stomach Cancer: 17 (MOH 2017)	**Cancer Prev.by most common types:** Lung: 13% increase Breast: 7% increase Stomach: 5% increase	**Partially achieved**
Number of attempts and deaths associated with suicide declines.	Total No. of Suicide Cases: 48 Attempts: 37 Deaths: 11 (MOH 2011)	Reduce by ½ (50%)	Total No. of Suicide Cases: 44 Attempts: 26 Deaths: 19 (MOH 2017)	Attempts – reduced by 4 cases Deaths – increase by 8 cases	**Partially achieved**
Injuries in children < 15 years	290 per 1000 admissions (MOH 2012)	50% decrease (184)	141 per 1000 admissions (MOH 2015)	50% decrease	**Achieved**
Key Outcome 3:	**Improved prevention, control and management of communicable diseases**				
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Prevalence and incidence of STIs	Incidence: 1217.7 (any STI) per 100,000 population (MOH 2012)	Reduce incidence by 50% (608 (any STI) per 100,000 population	Incidence: 569.8 (any STI) per 100,000 population (MOH 2017)	53.2% decrease	**Achieved**
	Prevalence: HIV = 12 living cases Syphillis = 0.10% Hepatitis B = 3% Hepatitis C = 1% Gonorrhea = 5.9% Chlamydia = 20% (MOH 2012)	Not defined	Prevalence: HIV = 11 living cases/1 death Syphillis = 0.70% Hepatitis B = 2.4% Hepatitis C = 0.10% Gonorrhea =10% Chlamydia = 23% (MOH 2018)	HIV = decrease by 1 case Syphilis = 0.60% increase Hep. B = 0.6% decrease Hep. C = 0.90% decrease Gonorrhea = 4.1% decrease Chlamydia = 3% increase	**Partially Achieved.** **Achieved:** - **HIV** - **Hep. B** - **Hep. C** **Not Achieved:** - **Syphilis** - **Gonorrhea** **Chlamydia**
Prevalence of notifiable diseases and vaccine preventable diseases – including water and food-borne	Prevalence: Typhoid: 0.06% AFR: 0.04% Diarrhea: 2.82% (MoH & NHS Lab 2008)	50% decrease Not defined Not defined	Prevalence: Typhoid: 0.05% AFR: 0.32% Diarrhea: 4.33% (MoH & NHS Lab 2018)	Typhoid = 0.01% decrease AFR = 0.28% increase Diarrhea = 1.51% increase	**Partially achieved**

diseases					
TB incidence and death rates associated with TB	New cases: 19 Deaths: 2 (MOH 2015)	50% decrease	New cases: 30 Deaths: 6 (MOH 2017)	New cases = increased by 11 cases Deaths = increased by 4 cases	**Not Achieved**
Acute respiratory infections among children under 5 years.	1,131 (PATIS, 2011)	10% decrease	867 (PATIS, 2017)	23.3% decrease	**Achieved**
% of drinking water suppliers complying with National Drinking Water Standards	SWA Boreholes: 33% Water bottled companies: 80% SWA Treatment Plants: 90.1% (MOH 2012)	Not defined	SWA Boreholes: 40% Water bottled companies: 92% SWA Treatment Plants: 98% (MOH 2018)	SWA Boreholes = 7% increase Bottled Water Companies = 12% increase SWA Treatment Plants = 6.9% increase	**Achieved**
Key Outcome 4:	**Improved Sexual and Reproductive health**				
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Life Expectancy at birth	71.5 males 74.2 females (Census 2006)	80 years	Male: 76 years Female: 79 years (Census 2016)	Male = 0.9% increase Female = 4.8% increase	**Achieved**
Total Fertility Rate	4.2 children per woman (Census 2006)	4	3.9 children per woman (Census 2016)	Decrease of 0.3 children per woman	**Achieved**
Adolescent Birth rate per 1,000 women	28.6 per 1,000 women (Census 2006)	30 per 1,000 women	31per 1,000 women (Census 2016)	1 per 1,000 per women increase	**Achieved**
Contraceptive prevalence rate	29% (SDHS 2009)	Increase to 75 – 80%	27% (SDHS 2014)	2% decrease	**Partially achieved**
Key Outcome 5:	**Improved Maternal Health**				
Indicators	Baseline	Target	Interim Measure	Progress	Status
Maternal mortality rate	40.2 per 1,000 live births (Census 2011)	23 per 1,000 live births	51 per 1,000 live births (Census 2016)	10.8 per 1,000 live births	**Not achieved**
% of births attended by skilled health personnel	81% (SDHS 2009)	95% coverage	83% (SDHS 2014)	2% increase	**Not Achieved**
Infant mortality rate	15.6 per 1,000 live births (Census 2011)	10 (50% decrease)	18.6 per 1,000 live births (Census2016)	3% increase	**Not Achieved**
Under 5 mortality rate	20 per 100,000 live births (Census 2011)	12 (50% decrease)	19.25 per 100,000 live births (Census 2016)	0.75% decrease	**Partially achieved**
% of infants exclusively breastfed for 6 months after birth	51% (SDHS 2009)	Increase to 90%	70% (SDHS 2014)	19% increase	**Partially Achieved**
Prevalence of cervical cancer in women aged 20 years and over	Number of patients admitted: 16 (MOH 2011)	Not defined	Number of patients admitted: 8 (MOH 2017)	8 no. of patients decreased	**Achieved**
Antenatal care coverage	92.7% (SDHS 2009)	Increase to 100%	93.3% (SDHS 2014)	0.6% increase	**Partially achieved**

Proportion of 1 year old children immunized against measles.	MMR1 = 55.7% MMR2 = 25.0% (SDHS 2009)	95% coverage	MMR1 = 76% MMR2 = 52% (SDHS 2014) MMR1 = 80% MMR2= 60% (NHS/EPI 2016)	MMR1 = 24.1% increase MMR2 = 35% increase	**Partially Achieved**
% of fully immunized children	25% (SDHS 2009)	Increase to 95%	53% (SDHS 2014)	28% increase	**Partially Achieved**
Key Outcome 6:	**Improved health systems, governance and administration**				
Indicators	Baseline	Target	Interim Measure	Progress to Date	Status
Waiting time for emergencies, triaging and general outpatients	<1 hour = 15% 1-2 hours = 25% > 2 hours = 57% **(MOH QA Report 2012)**	Emergency – within 5 mins. Triaging – within 20-30 mins.	<1 hr = 5.6% 1-2 hrs = 32.4% > 2 hrs = 61.9% **(MOH QA Report 2017)**	<1 hr = reduced by 9.4% 1-2 hrs = increased by 7.4% >2 hrs = increased by 4.9%	**Partially achieved**
Health facilities and providers are accredited and certified	Doctors = 89 Dentists = 13 Pharmacists = 9 R/Nurses = 135 E/Nurses = 71 Midwives = 37 **(MOH 2011)**	100% of all health practitioners are registered and licensed 100% of health facilities are accredited by 2018	Doctors = 108 Dentists =17 Pharmacists =13 R/Nurses = 274 E/Nurses =90 Midwives = 79 **(MOH 2018)**	Doctors = increased by 9 Dentists = increased by 4 Pharmacists = increased by 4 R/Nurses = increased by 139 E/Nurses = increased by 42	**Achieved**
Health facilities compliance with legislations, policies, protocols and standards	NIL	100%	Average of 70% compliance (MOH 2018)	Increased by 70%	**Partially achieved**
Proportion of clients satisfied with health services.	30% (2009/2010)	95%	58% (MOH Clinical Audit Report 2012)	No progress reported.	**Not Achieved**
Health facilities service & utilization rate	n/a	Not defined	70% average – health utilization rate (MOH 2018)	70% health facility utilization rate	**Achieved**
% of Health personnel aged 55 years and over	5% **(Samoa HRH Profile 2011)**	Not defined	No information available		**Not achieved**
Ratio per 100,000 population: - **doctors** - **dentists** - **nurses** - **pharmacists** - **midwives**	Doctors = 4.74 Dentists = 0.69 Pharmacists = 0.48 R/Nurses = 7.47 E/Nurses = 3.93 Midwives = 2.05 **(MOH, 2011)**	Not defined for all professionals	Doctors: 5 Dentists: 1 Pharmacists: 1 Nurses: 11 Midwives: 4 Enrolled Nurse: 4 (MOH 2017)	Increased by: Doctors = 0.26 Dentists = 0.31 Pharmacists = 0.52 R/Nurses = 3.53 E/Nurses = 0.07 Midwives = 1.95	**Achieved**
Total health expenditure as a percentage of GDP	5% (WHO, 2006)	Not defined	8.27% (NHA FY14/15) 7% (WHO, 2011)	2015 – 3.27% increase 2011 – 2% increase	**Achieved**
Government Expenditure on	19% (WHO, 2006)	Not defined	17% (NHA 2014-15)	2015 – 2% decrease	**Partially achieved**

health			25% (WHO, 2011)	2011 – 8% increase	
Key Outcome 7:	**Improved Risk Management and Response to Disasters, emergencies and climate change**				
Indicators	Baseline	Target	Interim Measure	Progress	Status
% of health organizations with disaster and emergency and climate change response plans developed and reviewed in the last 5 years.	4 (MoH, NHS, MKFS, Samoa Red Cross)	Not defined	4 health organizations with Disaster and Emergency Response plans include: (ix) MOH (x) NHS (xi) NKFS (xii) Samoa Red Cross Society	67% of Health Organizations have disaster and emergency response plans	**Achieved**
% of water service providers with water safety plans developed or reviewed in the last 5 years	80% treated supplies 33 independent scheme untreated 37 bore holes untreated	100%	4 Water Safety plans for independent water schemes being and implemented. 4 water safety plans for Samoa Water Authority being drafted.	4 water safety plans developed & 4 water safety plans being drafted	**Achieved**
% of household in the disaster zone with good sanitation 1 year post disaster.	n/a	At least 95%	-	No available information	**Not Achieved**
% of registered skilled health professionals with competencies to respond to emergencies and disasters.	n/a	Increase by 50%	100%	Health professionals were trained during disaster and emergency disaster drills for the tsunami in 2009 & Cyclone Evans in 2012 and disease outbreaks drills conducted by the sector for H1N1 in 2009 & Ebola in 2015.	**Achieved**

Overall, the health sector was able to achieve 39% (16 out of 41) of indicators under all 7 Key Outcomes highlighted above. The other 39% (16 indicators) are partially achieved and 22% (9 indicators) are not achieved. Most of indicators that are partially achieved are the indicators that cannot be realized within a short period of time and unpredictable. These include:

- Prevalence and incidence of NCDs
- Prevalence and incidence of Communicable and Neglected Tropical Diseases
- NCD Risk factors
- Mortality and suicide rates
- health facilities and services utilization and
- Percentage of household in disaster zone with good sanitation 1 year post disaster.

For the unachieved indicators, most of the information required for measuring these indicators is not available and some of indicators are not outcome indicators. Thus, there is a need for the health sector to revise these indicators.

3.3 Health Sector's Performance against Health Sector Plan 2008-2018 Work Program and Six Components of the Health System

The health sector's performance against the Health Sector Plan 2008-2018 Work Program which is strategized under the six components of the health system is considerably improved. Many of activities under each strategy had been implemented and completed while few need to revisit and/or reconsider for the next Health Sector Plan for the sector.

Overall, despite many challenging issues faced by the Health Sector during the lifetime of the Health Sector Plan 2008-2018, their performance against the health strategic outcomes and indicators in the SDS 2016/17-2019/20 and the Health Sector Plan Work Program is significantly progressive; while their performance against the Seven Key Outcomes are moderately progressive. This is due to the fact that most of indicators that are not achieved and in progress are long-term indicators and they can only be measured through Population Census and Demographic Health Surveys.

4.0 CHALLENGES AND RECOMMENDATIONS

4.1 CHALLENGES

As the review was conducted, challenges were noted with implementation. There were also challenges with data collection.

4.1.1 Health Sector Monitoring and Evaluation

The review of the Health Sector Plan 2008-2018 encountered challenges. There were indicators that could not be achieved as information was not available. Other indicators were too broad and could not be measured.

4.1.1.1 Health Information:

Samoa's health information system has evolved in an unpredictable, piecemeal process. This has resulted in a scattered health information system. Data collection and data analysis cannot be fully realized as data and information is not centralized. Data and information are not shared.

The challenge to successful monitoring and evaluation lies with the realization of the Ministry of Health's role and the need to access health data and information not only to monitor and evaluate the sector's performance, but to conduct its monitoring and regulatory role and responses where necessary.

With an agreed strategy and policy in place towards data and information management to realize and support the roles and responsibility of the different sector partners in achieving the health sector indicators and outcomes, there is the need to facilitate and coordinate through the e-Health Taskforce the immediate realization and implementation of the Health Sector Information system project (e-Health Project) funded under the Asian Development Bank.

4.1.1.2 Refusal by some Private Agencies to Submit Information:

One of the challenges faced by the NHA team in the compilation of this report was the refusal and reluctance of some private agencies to submit information to assist in compiling this report. There is no clear reason or indication of why they have refused to do so. However, it is important to note that after much difficulty in data collection the team managed to collect a representative sample of GPs to ensure the accuracy of the figures reported.

4.1.1.3 Human Resources for Health:

Even though the numbers of healthcare workers by different professions are increasing, health workforce still remains as a major challenge given Samoa's population is growing and at the same time, the health demands of the population for health services increases. Moreover, the sector is still challenged by the rapid increase in non-communicable disease cases as well as the re-emerging of infectious and or neglected tropical diseases.

4.2 RECOMMENDATIONS

4.2.1 Monitoring and Evaluation

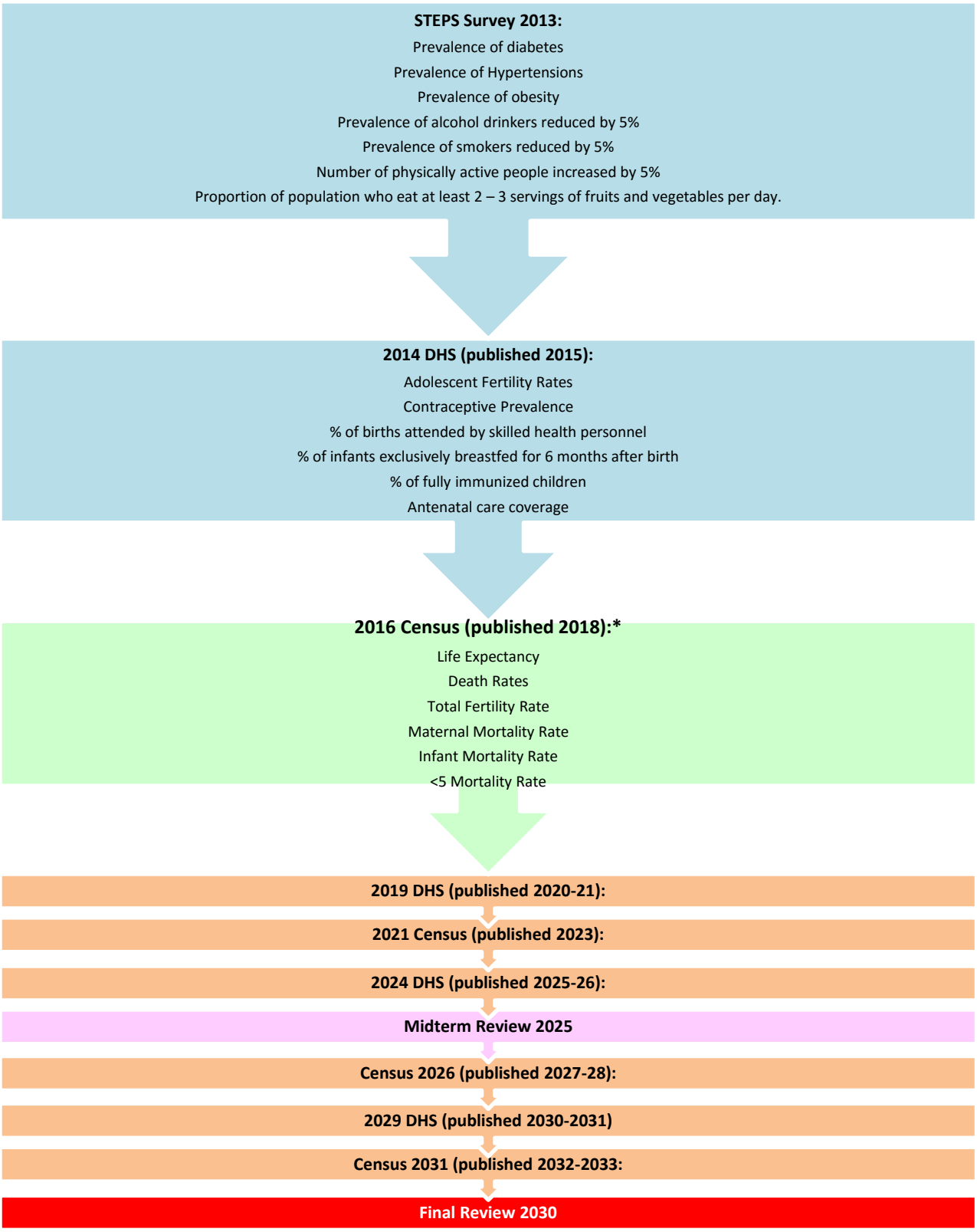
The first of these recommendations being that M&E indicators will need alternative sources of data for the next Sector Plan period, as population statistical sources (Census and the DHS) is not aligned with the availability of publications (see figure X). When the final review is scheduled to be conducted to inform the new plan in 2030, Census and DHS data for critical indicators will not be available for analysis. Additionally, the STEPS Survey (last conducted in 2013) has been discontinued and was used as a source of core indicators for NCD's, which are a top priority for the next 5-10 years for the Health Sector.

Baseline (2020 or most recent year available), 2025, and 2030 estimates will be needed for the following indicators:

- Prevalence of Diabetes, Hypertension, and Obesity
- Prevalence of alcohol drinkers reduced by 5%
- Prevalence of smokers reduced by 5%
- Number of physically active people increased by 5%
- Proportion of population who eat at least 5+ servings of fruits and vegetables per day

Many indicators need to be reworded, redefined, and updated to reflect their sources of data, health sector priorities and work plans. This is especially so with annual indicators reported by MoH and NHS. In many cases 1) indicators need to clarify specific diseases, 2) select specifically incidence or prevalence depending on the nature of the disease, 3) ensure that monitoring procedures and compliance standards are operationalized before compliance is monitored nationally, and 4) that there are existing sources of data for indicators as of 2020. Operational indicators that reflect deliverables, implementation, and outputs should be updated as the programs and activities change for the 2020-2030 period.

Figure 45: Schedule for 5 year M&E Indicators of the Health Sector Plan 2020-2030



**2018- Baseline data for Midterm Review is available for all indicators during this year*

Table 18: Annual Indicators covering the previous year:

Indicator	Source
Proportion of 1 year old children immunized against measles	EPI NHS
Waiting time in emergency departments, general outpatients and triaging	QA
Proportion of clients satisfied with health services.	QA
Total health expenditure (FY)	NHA reports
Government Expenditure on health (FY)	NHA reports
Prevalence and incidence of rheumatic heart disease	NHS, PATIS
Incidence and prevalence of cancer (2-3 most common types), to include Cervical Cancer in women under 20 years	NHS, PATIS, Samoa Cancer Society
Number of attempts and deaths associated with suicide declines.	NHS, PATIS
Injuries in children < 15 years	NHS, PATIS
Prevalence and incidence of STIs	MoH, HIV/STI/TB, Lab
Prevalence of notifiable diseases and vaccine preventable diseases – including water and Foodborne diseases	NHS, PATIS
TB incidence and death rates associated with TB	MoH, HIV/STI/TB, Lab
Acute respiratory infections among children under 5 years.	NHS, PATIS
% of drinking water supplies complying with National Drinking Water Standards	Surveillance Unit
Health facilities and providers are accredited and certified	MoH Registrar
Ratio per 100,000 population: physician, dentists, nurses, pharmacists, midwives, AHP	MoH Registrar and current Census
Population screened for early Non Communicable Diseases detection and diagnosed.	PEN Faasamoa and PATIS
Patient sent overseas for treatment reduced by 5%	OVT reports
100% compliance of healthcare workers with professional standards.	???

In addition, the review process demonstrated that there are indicators of the 2008-2018 periodthat need to be revisited in moving forward to ensure that the information required can be collected and can be measured.

Indicator	Rationale to remove
Health facilities service & utilization rate	• No data collected in past 10 years • Doesn't reflect prevention priorities, as health promotion reduces service visits
% of Health personnel aged 55 years and over	• Generic indicator that doesn't apply to limited healthcare human resource context of Samoa • No interventions for this indicator
Health facilities compliance with legislations, policies, protocols and standards	• Need to identify specific documents that facilities must comply with • Need monitoring procedures for those documents • Suggest to redefine or remove
100% compliance with disaster and climate resilience plans	• Does not reflect the current interventions/activities of climate change and disaster risk management within the sector • No current source of data
% of households in the disaster zone with good sanitation 1 year post disaster	• Does not reflect the current interventions/activities of climate change and disaster risk management within the sector • No current source of data

4.2.2 Human Resource for Health

There is a need for the following to be in place to address human resources for health supplies and demands and identify human resources priorities for the next sector plan:

(i) Formulate a new Human Resources for Health policy to address emerged human resources priorities for the health sector

4.2.3 Climate Change

It is recommended:

i) under the DRM Strategy to develop a comprehensive Disaster Management and Response Plan for the Health Sector that reflects a coordination and communication framework for all health agencies and to be led and coordinated by MoH. It also needs to reflect specific cross cutting actions.

ii) Plans should be reviewed or developed, in order to replace and possibly relocate Malietoa Tanumafili II Wards and Leulumoega Rural District Hospital. They are old structures located in hazard zones, and a detailed assessment should be undertaken as to when they need to be upgraded.

iii) Ensure that hospitals in hazard zones have suitable plans (including signs to safe zones) and well trained staff. This should include emergency simulation exercises.

iv) To officially identify helicopter landing sites and ensure they can be used during disasters, including Leulumoega RDH, which does not currently have one.

v) To produce a map for each hospital to ensure they are familiar with different routes to nearby hospitals and local hazards (e.g. landslips, bridges and fords). This was also included in the maps distributed to all hospitals in June 2017.

vi) Undertake routine testing on generators and water pumps.

vii) Assess the condition and suitability of the generators at Foailalo RDH, Poutasi RDH, Lalomanu RDH and Saanapu Health Centre, and undertake repairs or replacement if necessary.

viii) Undertake disaster simulations, and consider the event of fuel running out.

ix) Install new plastic tanks and a pump at Leulumoega RDH

x) During a disaster simulation the following should be tested:
   - Identify that the hospital staff are familiar with the radios and IT equipment
   - Identify that ERN radios and IT equipment works (i.e. internet has reasonable speeds and printers have ink)

xi) Contact Lufilufi Health Centre and Safotu RDH to identify if they have working ERN radios (as on site they said they didn't).

xii) Provide IT equipment (computer and printer) to Safotu RDH and internet to Faleolo

xiii) Review procedures for rural district hospitals coping with mass casualties during a disaster (e.g. if roads are unpassable by the waste truck)

xiv) Ensure Savai'i's contaminated waste truck is maintained and in good working condition. This is a critical piece of equipment

xv) Assess the suitability of the MT II (Tuasivi) morgue for coping with mass fatalities during a disaster (e.g. size, structure, back-up power)

xvi) Identify locations and sizes of other morgues (if any) on Upolu.

xvii) An official review should be undertaken by FESA, or equivalent, to identify the risks and risk mitigation procedures. This may include better evacuation signs, better plans and training for staff, and/or upgrade of fire safety equipment. (FESA have not been contacted to date, so they may already have further information on this topic)

xviii) Hard waste (e.g. chairs and beds) is to be removed from MT II and Leulumoega RHD (as they can become airborne in high winds).

Other Recommendations were also suggested by the assessment team which includes the following:

- Need to confirm temporary shelters that have been identified by the Rural District Hospitals during emergencies
- Segregation of Healthcare waste very poor for some hospitals, HCW truck also needs to be collecting waste on a fortnightly basis.
- Isolation rooms for the Rural District Hospital in Leulumoega are in very poor condition and needs to be renovated as well as considering its location.
- Water tanks for some of the hospitals do not have water pumps and need to be serviced in a timely manner
- Generators need to be serviced and ensure that fuel is readily available in times of disasters and emergencies.
- It is strongly recommended that the National Pharmaceutical Warehouse Building is not suitable for a temporary site for evacuation purposes. It can be considered for stocking of supplies for disaster and emergency purposes

4.3 Priority Areas for the Next Sector Plan:

Below are the areas that need to be prioritized in the development of the next sector plan for Samoa's health sector:

(i) Sustaining healthy lifestyles and strengthened services focusing on social determinants of health;
(ii) Strengthen governance functions of all sector partners through private and public partnership within the health sector
(iii) Enhancement of prevention, control and management of Non-Communicable Disease as well as infectious and or neglected tropical diseases;
(iv) Strengthen and enhance maternal health services;
(v) Strengthen and enhance reporting obligations of the health sector to the Ministry of Health for health sector's performance assessment;
(vi) Health impacts of climate change and disasters;
(vii) Strengthen monitoring and evaluation services and
(viii) Implementation of the e-health project.

5.0 CONCLUSION

During the ten years of Samoa's current Health Sector Plan 2008-2018, the health sector has produced many achievements as well as unpredictable challenges faced from time to time. Non-communicable diseases being declared as a national health crisis in Samoa, has been the focus of the Ministry of Health and the health sector in these ten years.

As mentioned earlier in this report, various programs and activities implemented by the sector had played a pivotal role in the fight to reduce Non-communicable diseases related illnesses, and pre-mature deaths in Samoa.

Human resources for health are considered throughout the lifetime of this Sector Plan a continuous challenge for the health sector. However, the Ministry being the leading agency of the health sector in collaborative effort with development partners provides avenues for the health workforce to further advance their knowledge and skills in the vast fields of health. As a result, health service provision will continue to improve over time a reduction of preventable errors is expected to occur.

Monitoring, regulating and evaluation of health sector's performance require ongoing development. Although many sector partners and stakeholders had put into action these roles, there is still a need for improvement. These roles at different levels within the health sector needs to be strengthened as well as sharing information within the health sector, which is an area that continues to be problematic since the first year of the Sector Plan.

As highlighted in this report, activities and programs reported included both locally funded and donor funded initiatives. Thus, the health sector is greatly indebted to its development partners: World Health Organization, World Bank, Australia DFAT, New Zealand MFAT, UNDP Global Fund, UNFPA, European Union and SPC in providing their continuous technical and financial supports for strengthening Samoa's health systems.

The Ministry of Health and the health sector will continue to commit its time and energy in realization of their responsibilities to ensure the people of Samoa is at the center of the health system.

6.0 REFERENCES

Amosa-Lei Sam, F. (2017) *Unpublished Report: Socio-Demographic Risk Factors Profile, Prevalence, Treatments and Outcomes of Cancer in Samoa: A 10 year retrospective study 2007-2016.*Apia

Food and Agriculture Organization. 2011. *Samoa's Food Country Profile.* Apia

Food and Agriculture Organization. 2009. *The Evolution of Samoa's Food Supply Situation: Trends over the past 40 years based on Analysis of Food Balance Sheets.* National Food Summit. Apia

Government of Samoa. 2006. *Ministry of Health Act 2006.* Apia

Government of Samoa. 2006. *National Health Service Act 2006*

Mackerras, D. 1999. *Samoa National Nutrition Survey.*

McGarvey, S.T. et al. 2007. *Nutrition and health in modernizing Samoans: temporal trends and adaptive perspectives.* Cambridge University Press, Cambridge

Ministry of Finance.2017 *Strategy for the Development of Samoa FY2016/17 – FY2019/20.*Apia

Ministry of Finance. 2012. *Strategy for the Development of Samoa 2012-2016.* Apia

Ministry of Health. 2017. *National Health Sector Disaster Risk Management Strategy 2017*. Apia

Ministry of Health.2016 & 2017.*National Health Sector Career Talk Program 2016 & 2017.*Apia

Ministry of Health. 2014. *Ministry of Health Services Standards 2014.* Apia

Ministry of Health. 2013. *National Alcohol Control Policy 2013-2018.* Apia

Ministry of Health and World Health Organization. 2013. *Samoa STEPS Non-communicable Disease (NCD) Risk Factors Survey Report 2013.* Apia

Ministry of Health. 2013. *Health Sector Plan 2008-2018 Mid-Term Review Report.* Apia

Ministry of Health.2008 – 2017.*Annual Health Sector Forum Reports (2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017).*Apia

Ministry of Health.2011, 2013, 2015.*Samoa & American Samoa Bilateral Health Summit Reports*. Apia

Ministry of Health.2008 – 2013.*Annual Reports for Financial Years (2008-09, 2009-10, 2010-11, 2011-12, 2012-13)*. Apia

Ministry of Health. 2008. Health Sector Plan 2008-2018

Ministry of Health & WHO. 2013. *NCD Risk Factor Stepwise Report 2013.* Apia

Ministry of Health & WHO. 2013. *NCD Risk Factor Stepwise Report 2002.* Apia

Ministry of Natural Resources and Environment. 2012. *Water and Sanitation Sector Plan 2012-2016*. Apia

MOH Realignment Review Committee. 2011. *Review of the Ministry of Health Realignment.* Apia

National Health Service. 2017. *Overseas Medical Treatment Report for FY2014-15 and FY2015-16.* Apia

Samoa Bureau of Statistics. 2017. *Samoa Population Census 2016 Report: Preliminary Results.* Apia

Samoa Bureau of Statistics. 2014. *Samoa Demographic and Health Survey Report 2014.* Apia

Samoa Bureau of Statistics. 2009. *Samoa Demographic and Health Survey Report 2009.* Apia

Samoa Ministry of Health & JTA International, 2006, *Samoa Health Sector Situational Analysis.* Apia

WHO et al. 2014.*Samoa NCD Risk Factors STEP Survey Report.* Apia

[i] Preliminary GYTS 2017 results
[ii] Ministry of Health Samoa mCessation Project Final Report
[iii] ICHAP Survey Final Report 2017 MOH