

2016

Global AIDS Progress Report of Tuvalu



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1. Foreword by Minister of Health:

It is time once again to review our past years performance and achievement in Tuvalu. 2015 has been an eventful with strategic direction for the ministry of health moving forward as a member of UNAID bringing to fruition the implementation of the strategic goal of the Tuvalu National Strategic Plan for HIV and STI or priority program areas of the strategic plan.

In June 2011, Tuvalu joined the international community to sign the 2011 Political Declaration on HIV and AIDS; reconfirming its previous commitments made in 2001 and 2006. The Political Declaration motivates and compels countries to work towards achieving the Millennium Development Goal. Goal Six to halt and reverse the spread of HIV epidemic. The 2011 Political Declaration demonstrates the spirit of planning for results through setting time bound targets that countries should achieved.

I am pleased to announce achievements made in responding to the epidemic in Tuvalu, first of all by keeping Tuvalu a low level HIV country. People Living with HIV and AIDS are accessing treatment and we expect that this will translate into improvements in life expectancy. The Government has recognized the contribution of community organizations, in particular in prevention programmes. The National AIDS Spending Assessment (NASA) 2013 uncovered, that the Government contribution to HIV is on the rise and spending priority is given to the education of young population on how to prevent.

The country is not only committed but has demonstrated political support for the response. Such support will be sustained to ensure that we achieve the Universal Access targets. I am pleased that this report demonstrates our collective successes and the achievements are attributed to the people of Tuvalu; the youth who begin their sexual lives having attuned to safer behaviours; the women who visit antenatal care clinics to protect their unborn children; the men who are getting circumcised; the key populations who are coming out to become active partners in HIV prevention efforts and the households who participate in national surveys.

On behalf of the Government, I would like to conclude by taking this opportunity to express my gratitude and appreciation to all multisectoral stakeholders. The collective efforts of the friends of Tuvalu; the Civil Society, development partners, bilateral and multilateral donors, including business can never be overlooked. All this has been made possible by the commendable commitment of the Government of Tuvalu in providing the leadership and guidance that is necessary to spur the country to meet MDGs.

Lastly, I still believe an HIV-free generation is possible; through continued engagement, participation and shared responsibility. For now let us carry this document with pride and the knowledge that significant milestones have been achieved by the country.

Hon Satini Manuela
Minister of Health

1.2 Acknowledgements

This report was prepared by the Ministry of Health of Tuvalu on March 31, 2016 with technical support from UNAIDS Office in the Pacific.

This report was coordinated by the Tuvalu Department of Public Health which is leading the HIV/AIDS program response in Tuvalu. The data and analyses presented in this report was drawn from a diverse range of sources including (but not limited to): Department of Public Health and the Tuvalu Princess Margaret Hospital, Laboratory and STI Clinic administrative and reporting data; Tuvalu's Demographic Health Survey 2007 and key informant interviews.

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2. Indicator Overview

	<i>Indicators</i>	<i>Value 2014</i>	<i>Value 2015</i>	<i>Source</i>	<i>Comments</i>
Indicators for the general population	1.1 Young People: Knowledge about HIV Prevention*	Data reported in 2013	No new data	DHS 2007	60,7% all males and 39.4% for females
	1.2 Sex Before the Age of 15	Data reported in 2013	No new data	DHS 2007	14.7% all males and 1,7% all females
	1.3 Multiple sexual partners	Data reported 2013	No new data	DHS 2007	4% all males and 1.1% all females
	1.4 Condom Use During Higher Risk-Sex*	Data reported in 2013	No new data	DHS 2007	Male 15-19 – 19,9%; Male 20-24 – 21,,9%; Female 15-19 – 6,4%; Female 20-24 - 1,1%
	1.5 HIV Testing in the General Population	n/a	50%	MOH data	11 HIV/2 dead
	1.6. HIV prevalence from antenatal clinics by age group	n/a	0,9%	Routine surveillance	214 tested 0 positive
	1.20 HIV incidence rate				
Indicators for sex workers	2.2 Sex Workers: Condom Use	n/a	No new data	No activities for FSWs	
	2.3 Sex Workers: HIV Testing	n/a	No new data	No activities for FSWs	
	2.4 Sex Workers: HIV Prevalence	n/a	No new	No activities	

			data	for FSWs	
Indicators for men who have sex with men	2.5 Men who have sex with men: Condom Use	n/a	No new data	No activities for MSM	
	2.6 Men who have sex with men: HIV Testing	n/a	No new data	No activities for MSM	
	2.7. Men who have sex with men: HIV Prevalence	n/a	No new data	No activities for MSM	
Indicators for IDUs	2.8 People who inject drugs: Number of needles/IDU	No IDUs			
	2.9. People who inject drugs: Condom Use	No IDUs			
	2.10 People who inject drugs: Safe Injecting Practices	No IDUs			
	2.11 People who inject drugs: HIV Testing	No IDUs			
	2.12 People who inject drugs: HIV Prevalence	No IDUs			
	2.13 People on opioid substitution therapy	No IDUs			
Indicators for inmates	2.14. HIV prevalence in inmates/detainees		No data		
Indicators for transgender	2.15. HIV prevalence in transgender people		No data		
Prevention of mother-to-child transmission (PMTCT)	3.1 Prevention of Mother-to-Child Transmission		0%		0 pregnant women, total tested 126
	3.2 Early Infant Diagnosis		0%		0 children born with HIV+ mothers
	3.3 Mother-to-Child transmission rate (modelled)		No data	MOH	
	3.3 a Mother-to-child transmission of HIV (based on programme data)	Not relevant	0%	MOH	0 children born
	3.4 Pregnant women who were tested for HIV and received their results	100%	100%	MOH	126 /126 pregnant women all tested for HIV

	3.5 Testing coverage of pregnant women's partners (UA)	No data	No data		
	3.7 Coverage of infant ARV prophylaxis (UA)	Not relevant	No data		0 children born with HIV+
	3.9 Cotrimoxazole (CTX) prophylaxis coverage (UA)	Not relevant	No data		0 children born from HIV+
ART Treatment	4.1 ART coverage (adults and children)* , including Number of eligible adults and children who newly enrolled on antiretroviral therapy during the reporting period	Not relevant	0%		9 people with HIV+ none in treatment
	4.2 HIV Treatment: 12 months retention	Not relevant	Not relevant		No patients in treatment
	4.2b HIV Treatment: 24 months retention	Not relevant	Not relevant		No patients in treatment
	4.2c HIV Treatment: 60 months retention	Not relevant	Not relevant		No patients in treatment
	4.3 HIV Care Coverage	0	64,3%	MOH	No patients in treatment
	4.4 ART stockouts	no	no	MOH	
	4.5 Late HIV diagnoses	Na	Na		
	4.6 Viral Load suppression	Not relevant	Na		
	4.7 AIDS-related deaths	Not relevant	Na		
AIDS Spending	6.1 AIDS Spending - Domestic and international AIDS spending by categories and financing sources				
Gender	7.1 Prevalence of Recent Intimate Partner Violence (IPV)	46.6%	No new data	FHSS funded by UNFPA	
Stigma and discrimination	8.1 Discriminatory attitudes towards person living with HIV (new indicator)	73,6% men and 72,1%	No new data	DHS 2007	

		women would not buy vegetables from a shopkeeper or vendor if they knew this person had HIV			
HIV/TB Co-infection	11.1. Co-Management of Tuberculosis and HIV Treatment	Not relevant	No data		
	11.2. Proportion of people living with HIV newly enrolled in HIV care with active tuberculosis (TB)	Not relevant	No data		
	11.3. Proportion of people living with HIV newly enrolled in HIV care started on tuberculosis (TB) preventive therapy	Not relevant	No data		
Hepatitis/HIV co-infection	11.4. Hepatitis B testing	Not relevant	No data		
	11.5. Proportion of HIV-HBV co-infected persons currently on combined treatment	Not relevant	No data		
	11.6. Hepatitis C testing	Not relevant	No data		
	11.7. Proportion of persons diagnosed with HIV-HCV infection started on HCV treatment during a specified time frame (e.g. 12 months)	Not relevant	No data		
STIs	11.8. Syphilis testing in pregnant women		100%	MOH	245/245
	11.9. Syphilis rates among antenatal care attendees		16,7%	MOH	461/77
	11.10. Syphilis treatment coverage among syphilis positive antenatal care attendees		Data not available		
	11.11. Congenital syphilis rate (live births and stillbirth)		Data not available		
	11.12. Men with urethral discharge		Data not		

			available		
	11.13. Genital ulcer disease in adults		Data not available		
	P.1b WHO POLICY QUESTIONS				
	Key population size estimations	Na			

3. Status at a glance

3.1 Geography

Tuvalu formerly known as the Ellice Islands is located in the South Pacific, just to the north of the Fiji Islands. It is the smallest independent country in the South Pacific, comprising of nine low lying coral atolls with a population of 9561. The total land area is only 26 sq. km, with a large ocean economic zone of more than half a million square kilometres. The highest elevation is five meters above sea level making it the first nation to submerge under water from the effects of global warming. The capital of Tuvalu is Funafuti. Tuvalu's total land area is 26 km², which is relatively evenly distributed across the nine atolls. Six out of the nine atolls have lagoons that are open to the ocean; these are Nanumea, Nui, Vaitupu, Nukufetau, Funafuti and Nukulaelae. Nanumaga and Niutao have landlocked lagoons while Niulakita has no lagoon at all. All of Tuvalu's islands are low-lying, the highest being only 4 m or 5 m above sea level. As a result, Tuvalu is at great risk of becoming one of the first nations to succumb to the effects of climate change and sea level rise. Tuvalu's limited land area is generally of low quality with poor fertility and thus is unsuitable for agriculture.

3.2 Tuvalu Economy and Government

The first inhabitants were Polynesian people prior to the arrival of the British in the late 19th century. The islands was then administered by Britain as part of a protectorate from 1892 to 1916 and as part of the Gilbert and Ellice Islands colony from 1915 to 1974. Tuvalu became fully independent in 1978 within the Commonwealth after voting for separation in 1974. Tuvalu is a constitutional monarchy and Commonwealth realm with Queen Elizabeth II recognized as Queen of Tuvalu, represented by a Governor-General in Tuvalu. The local parliament has 15 members and is elected every four years. Its members elect a Prime Minister who is the head of government. The Cabinet is appointed by the Governor General on the advice of the Prime Ministerⁱ. Tuvalu has very limited natural resources, and its main form of income consists of foreign aid. Subsistence farming and fishing remain the primary economic activities. Government revenues largely come from the sale of stamps, coins, fishing licences and worker remittances. Substantial income is received annually from an international trust fund established in 1987 by Australia, New Zealand, and the United Kingdom and supported by Japan and South Korea. This fund grew from an initial \$17 million to over \$35 million in 1999. The sale of its ".tv" internet domain name and the use of its area code for "900" lines generated more revenue for this small nation.

3.3 Demographics

Tuvalu has few development opportunities and is highly dependent on development assistance. The country is constrained by its small size and small population of approximately 10 000 people spread across nine islands—47 per cent of the population, 4500 people, reside on the main island of Funafuti. Tuvalu is also limited by few opportunities for economic growth and distance from

economic markets. Tuvaluans rely on the public sector as their principal source of employment and diaspora remittances also help to increase household incomes. The country is vulnerable to climate change and susceptible to a high frequency of natural disasters.² On 28 September 2011, the Government of Tuvalu declared a state of emergency due to water shortages. This was the second worst drought on record for Tuvalu.ⁱⁱ

There are limited employment opportunities in Tuvalu. The country will participate in Australia's permanent Pacific Seasonal Worker Program from July 2012 which is expected to provide more opportunities for diaspora remittances.

Total Enumerated population	9,561	4,729	4,832
Urban population (Funafuti)	4,492	2,281	2,211
Rural population (Outer Islands)	5,069	2,448	2,621
Resident population	9,359	4,614	4,745
Urban population (Funafuti)	3,962	1,994	1,968
Rural population (Outer Islands)	5,397	2,620	2,777

3.4 Tuvalu National AIDS Strategic Plan

The End term review of the Tuvalu national AIDS Strategic Plan 2009 – 2013 was conducted in early October 2014 with a technical assistance from SPC. The review was done together with the development of the Global Fund, multi-country Concept Note.

Below are the Key Results Area (KRA) with outputs during the end term review October 2014

1. KRA 1: Reduced Prevalence of STIs and HIV
 - Output 1a. Behaviour change strategy developed
 - Output 1b. Strategy for HIV and STI prevention among Tuvalu youth devised and implemented.
 - Output 1c. Prevention strategies specifically targeting vulnerable groups designed and implemented.
 - Output 1d. Increased condom and lubricant use among the sexually active population
 - Output 1e. Safe blood supply maintained throughout Tuvalu.
 - Output 1f. Universal precautions implemented in health care facilities and other relevant setting.
 - Output 1g. Post exposure prophylaxis policy developed and implemented.
 - Output 2h. Effective, voluntary and confidential counselling for HIV and STI testing and management throughout Tuvalu.

2. KRA 2: Reduced morbidity and Mortality from AIDS.
 - Output 2a. A comprehensive national policy for treatment, care and support for people living with HIV.
 - Output 2b. A trained multidisciplinary HIV care team operating in Tuvalu's main hospital.
 - Output 2c. Health facilities adequately resourced to enable treatment and care of people with HIV.

- Output 2d. Comprehensive program of community based support available for HIV infected and affected by HIV and AIDS.
 - Output 2e. Strategy for the reduction of stigma and discrimination of people infected and affect implemented.
 - Output 2f. Effective management of STIs on each island of Tuvalu.
 - Output 2g. Laboratory support for HIV and STI diagnosis and management enable in the Princess Margret hospital
 - Output 2h. Comprehensive program of prevention of parent to child transmission of HIV.
 - Output 2i. Male circumcision practiced widely throughout Tuvalu.
3. KRA 3: Efficiency and effectiveness of the program management Improved
- Output 3a. Effective multisectoral engagement in the NSP
 - Output 3b. Improved coordination and management of the national HIV response.
 - Output 3c. Comprehensive program of HIV and STI surveillance and research implemented and disseminated.
 - Output 3d. One national monitoring and evaluation framework designed and implemented.
 - Output 3e. Evidence based planning undertaken on annual basis.
 - Output 3f. Tuvalu’s national HIV response adequately resourced.

3.5 Monitoring and Evaluation

Consolidated monthly reports (CMR) are sent by the nurses based in the health centres in the islands to PMH. The only health statistician based in Funafuti, compiles all the data. Since the CMR, is sent via ships, it takes a long time to arrive thus generating timely reports becomes a challenge. Sometimes discrepancies or incomplete CMR causes further delays. To address this, the health statistician travels to the island and collaboratively works with the staff stationed there to correct any inconsistencies. HIV data is regarded as “highly confidential” and is kept with the Director of Ministry of Health.

Bi-annual trainings are conducted for junior and senior nurses at PMH to give them feedback about the CMR and as an incentive for improving the reporting process. Special sessions are delivered by field experts on gaps that were highlighted in the CMR.

Tuvalu is basing its research and evaluation on the Population Based Approaches under the responsibility of the Tuvalu Central Statistics Department which is under the authority of the Ministry of Finance and is responsible with censuses, civil registration and population surveys. Health Data are usually collected from outer-islands Health Clinics using CMR forms. The Health Managers: SOH, DOH, MS, CPH, Statistician & the help of his Assistant are responsible for:

- * Data handling & collection
- * Data Storage
- * Data Processing
- * Compiling & data analysis

The Health Information Products later are transformed into a Health Annual Report.

For prevention programmes data are being collected focusing on specific problems. The value of the health data are considered to be reliable and will be used by decision-makers. The data will be disseminated within the Ministry of Health, Department heads and to outer island health clinics and other interested organizations.

Currently the Health information System strategy is underway of improving the way of communications by replacing the paper based reporting from outer islands with electronic information. An upgrade the existing HIS is foreseen by means of installation of ICT at their respective Health Clinics so that they can access through the internet.¹

Based on previous experience the data follow 3 ways of reporting:

- * Facsimile Transmission
- * Surface Mail Delivery
- * Hand Safe Delivery (not recommended)

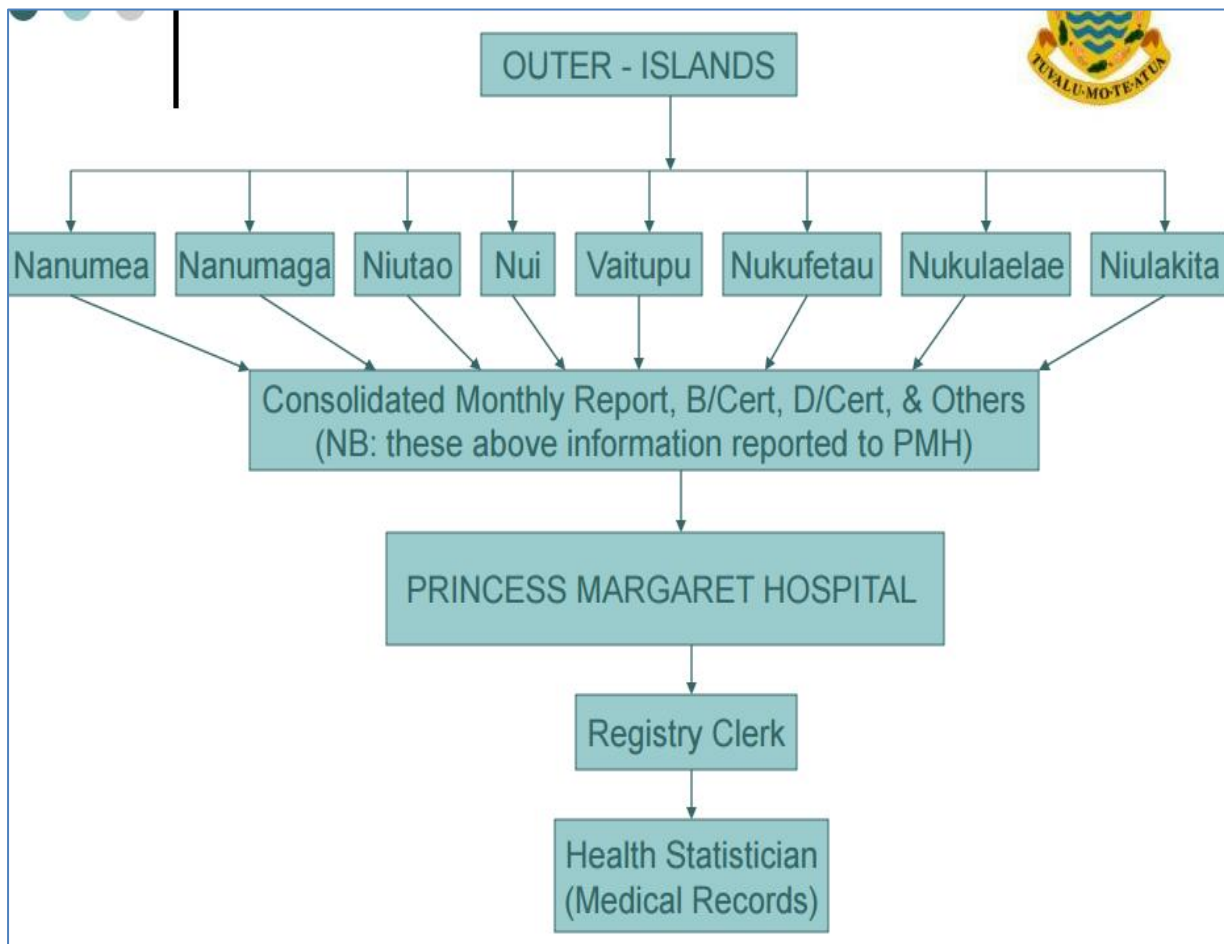
Internet connection was established in outer islands very recently and it is not fully functional yet. There is no specific M&E Plan developed for the NSP of Tuvalu.

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Figure 2. Reporting System in Tuvalu

¹ <http://www.uq.edu.au/hishub/docs/Tuvalu.pdf>



3.6 Health Infrastructure in Tuvalu

The Ministry of Health Tuvalu operates from Funafuti the capital island, where the main referral hospital, Princess Margaret Hospital (PMH) is based. The 30 bed hospital provides secondary level care for the whole population of Tuvalu with referrals to Fiji and New Zealand for a few who need tertiary or specialized medical care. The hospital is run by 8 medical officers, 20 nurses, 10 paramedical staff and 10 support staff. The other eight islands in the group have a medical centre manned by two nurses, a nurse assistant and two primary health care workers.

Medical treatment and care services are free for all Tuvaluan citizens including free medications, hospital stay, and any in-country referrals from any outer island medical centre to PMH. The Ministry of Health operates a medical treatment scheme to cater for all medical referrals outside Tuvalu. New Zealand Health also provides a similar scheme for treatment of Tuvaluans referred to Fiji and New Zealand. The average number of births per year is 241 (1997-2002) with a crude birth rate of 26.0 per 1000 population for the same period. The total fertility rate is 3.7 with the mean age of childbearing at 29.3 years [32]. The average number of deaths per year is 94 with a crude death rate of 10.2 per 1000 population. Life expectancy is 65 years for women and 61 years for men. Non-communicable diseases remain the leading causes of morbidity and mortality with cardiac diseases accounting for the majority of deaths. Diabetes mellitus, hypertension, obesity, and cerebral-vascular disease are among the others. Communicable diseases such as tuberculosis thought to be

under control are now increasing with an average of 15 new cases of sputum positive infections every year.

Tuvalu's public spending on health was 10% of GDP in 2010, equivalent to US\$534 per capita. In the most recent survey conducted between 1997 and 2010 there were 109 doctors and 582 nurses and midwives per 100,000 people. Additionally, 98% of births are attended by qualified health staff (2007-12), and 98% of one-year-olds immunised with one dose of measles (2011). In 2010 98% of the country's population was using an improved drinking water source and 85% had access to adequate sanitation facilities. The most recent survey, conducted in the period 2000-11, reports that Tuvalu has nine pharmaceutical personnel per 100,000 people.

Legislation in Tuvalu prevents the operation of private medical practices and pharmacies, and all facilities available on the islands are public, with 99% of total health funding being provided by the government. The country's one hospital, Princess Margaret Hospital, is located in Funafuti and is capable of providing basic primary healthcare, dental and pharmaceutical services. There are also eight medical centres, located on the outer islands, which are staffed by nurses. Tuvalu's main pharmacy is located in the Princess Margaret Hospital, and is responsible for the procurement of drugs and reproductive health commodities from suppliers. The Department of Pharmacy, which is a branch of the Ministry of Health, is responsible for organising training for nurses working in Tuvalu's medical centres, such that they are proficient in the ordering and management of medicines and drugs.

A significant drain on GoT resources is occurring through the Tuvalu Medical Treatment Scheme. There have been and are continuing a number of reviews of the Scheme, and the MoH is the key player in the management of the Scheme. Cost overruns in the TMTS threaten the ability of the MoH to maintain effective services.

Currently the model of care for OI health services is based on the health centre being staffed by (1) an experienced Nurse Midwife, (2) a Registered Nurse with Diploma level training, (3) a nursing assistant, and (4) a Sanitation Officer. This is a suitable staffing establishment for such communities and the MoH is to be congratulated for achieving such a sustainable and appropriate service. This model and the MoH budget are therefore at extreme risk if the doctors now in training in overseas institutions are to be found positions in the OI when they complete their training. The MoH needs to urgently consider the implications of increasing the medical establishment and impact the current model of care.

The other eight islands in the group have a medical centre manned by two nurses, a nurse assistant and two primary health care workers. Medical treatment and care services are free for all Tuvaluan citizens including free medications, hospital stay, and any in-country referrals from any outer island medical centre to PMH. The Ministry of Health operates a medical treatment scheme to cater for all medical referrals outside Tuvalu. New Zealand Government (NZ AID) also provides a similar scheme for treatment of Tuvaluans referred to Fiji and New Zealand.⁷

PMH is the main centre for child birth. Due to the geography of Tuvalu and shipping being the main mode of transport (which takes between 4 hours – 22 hours of travel each way from Funafuti), each island has a trained mid- wife. First time mothers as well as women with history of previous complicated deliveries or suspected complex cases are always referred to PMH at about 32 weeks of gestation. Around 99% - 100% of births take place in the hospital and are attended by skilled health

personnel. 8In addition, TUFHA and PMH also provide family planning services. VCCT is offered to all pregnant mothers in Funafuti. Counselling is done by a group of certified HIV counsellors.

The early- referral plan from the islands has been a key influence in reducing Infant mortality rate by two – thirds (66.7%) for the period 1992 – 2009.

There is no HIV legislation in Tuvalu. Work is continuing in drafting the new legislation. Currently, there is no Tuvalu National Strategic Plan for HIV/STI but Tuvalu is making use of the Regional Pacific Sexual Health & Well-Being SHARED AGENDA 2015-2019 is the guiding document for all HIV programs. TUNAC is the National HIV coordination mechanism and meets every two months.

Certified HIV Counsellors provide voluntary and confidential counselling services. Upon consent, a HIV test is performed at PMH. The laboratory at PMH is currently working on a HIV Testing policy.

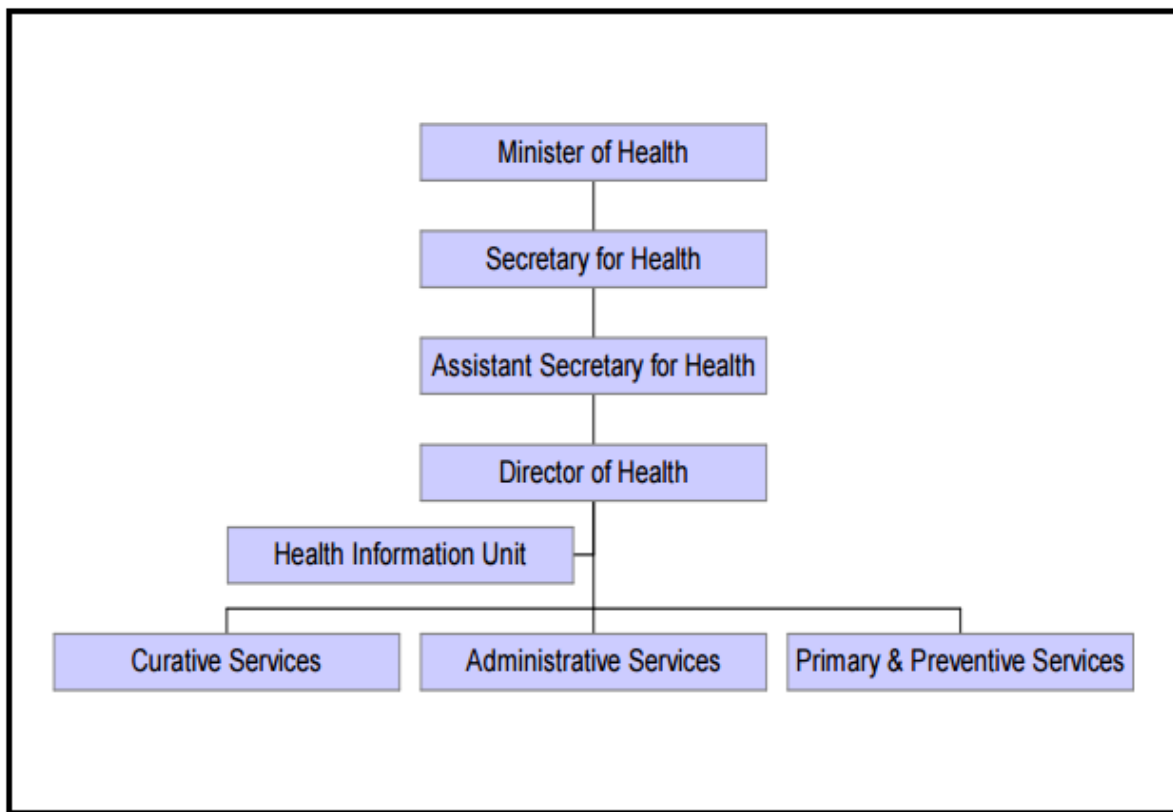
Infant mortality in Tuvalu was 25 deaths per 1,000 live births in 2012, with an under-five mortality rate of 30 deaths per 1,000 live births. As shown in Graph 1, there has been a consistent decline in the under-five mortality rate since 1990. Although this decline is encouraging, the under-five mortality rate is not yet in line with the country's target of 19 deaths per 1,000 live births, as defined by Millennium Development Goal 4 (MDG 4). In 2010 the three most prominent known causes of death for children below the age of five year were injuries (23 per cent), prematurity (17 per cent) and congenital anomalies (16 per cent). Other contributory causes were birth asphyxia (ten per cent), pneumonia (nine per cent) and neonatal sepsis (six per cent). In the period 2007-12, 98 per cent of births in Tuvalu were attended by qualified health staff.ⁱⁱⁱ

The year 2008 marked the beginning of the health reform process, with the development of a new health master plan to guide the work of the Ministry of Health over a 10-year period stretching from 2009 to 2019. The Strategic Health Plan 2009-2019, completed in early 2009, provides the Ministry of Health with the renewed aim to focus on primary health care and disease prevention. In 2011, a review of several pieces of health legislation has been undertaken, including the Nurses Act, the Medical and Dental Act, the Public Health Act and the Pharmacy and Poison Act.

The options for development of an umbrella Act for Health Professionals in Tuvalu are also currently being reviewed. Development of the health infrastructure in the outer islands was another successful project that the Ministry of Health started to execute in 2008. The Ministry secured funding through the Government of Japan's Grant Assistance for Grassroots Human Security Projects to build a new medical centre for Vaitupu Island, to be followed by Niutao Island Medical Centre and Nui Medical Centre in 2009.

The same project will also cover new medical centres for the remaining outer islands. The new centres will improve the delivery of health services to the outer islands, with better facilities for inpatient care. In Funafuti, the renovation of the Reproductive Health Clinic to house the integrated programmes for Reproductive Health, Maternal Child Health, HIV and STI, TB and Adolescent Health Development was completed in early 2009.^{iv}

Figure 1. Organizational Chart of the Ministry of Health, Tuvalu



3.6 STIs and HIV in Tuvalu

Tuvalu is a small country with a land area of approximately 26 square kms. The islands are spread over a large area, making it fairly difficult to access the outer islands regularly for prevention and education activities. Population density is highest in Funafuti, the main island, which has approximately half (47%) of the total population, many of whom work for the government. The population stands at approximately 10,900 people. Life expectancy in 2010 was 69.6 years (64.4 for males, 71.1 for females), and the Infant Mortality Rate was 10.3 percent in 2010. Unemployment is on the rise and job opportunities are limited throughout Tuvalu, particularly on the outer islands. As a result, there is increasing migration from the outer islands to Funafuti as people seek employment and the better services available there. The 2013 GDP was USD 3,880 (World Bank). The population in Tuvalu is highly mobile, both nationally, between the islands and internationally. This mobility increases the risk of exposure to HIV and other STIs.

The first HIV case in Tuvalu was found in 1995. The cumulative number of HIV cases by the end of 2012 was 11, two of whom have died. Of the 9 people with HIV still alive, none are currently enrolled in ART. In 2013, a total of 791 persons were tested for HIV, which represents 7.5 percent of the total population; no HIV cases were found. In 2011 three new HIV cases were identified, two in 2012 and most recently, three in 2015. For a population of approximately 11,000 people, this represents the highest rate of confirmed HIV cases of all 11 countries (MOH Tuvalu, 2012). Of all people (males, females) tested for STIs in Tuvalu in the 2011-2015 period (see details below), the proportion of cases detected was 9.5 percent for Chlamydia; 2.5 percent for Gonorrhoea; 4.9 percent for Syphilis; and 0.18% for HIV.

3.6.1 Chlamydia Statistics in Tuvalu

Table TV-1 shows the total number of Chlamydia tests reported by Tuvalu in the 2010-2015 period: as one of the smallest Pacific Island countries with only approximately 11,000 inhabitants, Tuvalu represented 2.3 percent of all Chlamydia tests in this period, with a total of 2,783 tests – a relatively high proportion, taking into account the small population and the fact that no Chlamydia data were reported for 2010 and 2015.

Table 1: Total No. of Chlamydia tests, Tuvalu, 2010-2015

2010	2011	2012	2013	2014	2015	TOTAL	% of total
n/a	525	1,157	446	655	n/a	2,783	2.3%

Figure 1 shows the number of Chlamydia tests among males, females, pregnant women (ANC), as well as totals for all tests (male and female) for the period 2010-2014 (2010 and 2015 data were not available). For most years, the availability of data on Chlamydia testing was limited to half a year; complete data were available only for 2012. This explains the apparent increase in testing in 2012, which is due to missing data for the other years. It is expected that on average 1,050-1,300 Chlamydia tests were conducted each year.

Almost two-thirds of all Chlamydia tests reported in the 2011-2014 period were done among females (61.4% females vs. 38.6% males), with pregnant women tested at antenatal (ANC) facilities representing more than half (51.3%) of all females tested. Most of the remaining women were tested at outpatient departments (OPD) or at the Tuvalu Family Health Association (TuFHA) and on outer islands. Most males were tested at outpatient departments (OPD), with smaller numbers tested at the Tuvalu Maritime Training Institute, the TuFHA NGO clinic, as well as small numbers of seafarers, who are considered a key population at risk. Only about half (52.9%) of all pregnant women were tested for Chlamydia in the 2011-2014 period in Tuvalu.

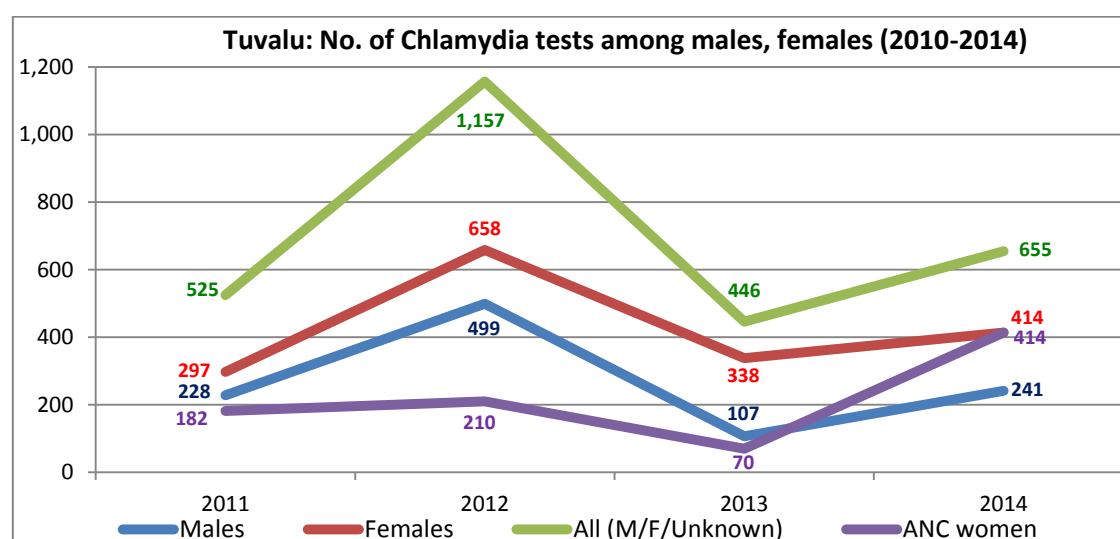


Figure 1: Total number of Chlamydia tests conducted in Tuvalu among males and females (including ANC women), 2010-2014

Figure 2 shows the number of Chlamydia cases detected in the 2010-2014 period: the trends are similar to the trends in numbers of males and females tested (see Fig. 1 above), i.e. the limited availability of data for 2011, 2013 and 2014 results in an apparent “peak” in 2012, which is due to missing data for the other years. Taking into account the limited data for 2014, however, there appears to be a disproportionately high number of cases in 2014, preceded by particularly few cases in 2013. Among males tested, most Chlamydia cases are found among OPD patients, with smaller numbers among seafarers, students at Maritime schools and outreach clients. Among females, two-thirds of all cases (66.9%) is found among ANC women; with most of the other cases found at OPD and some at NGO clinics (TuFHA).

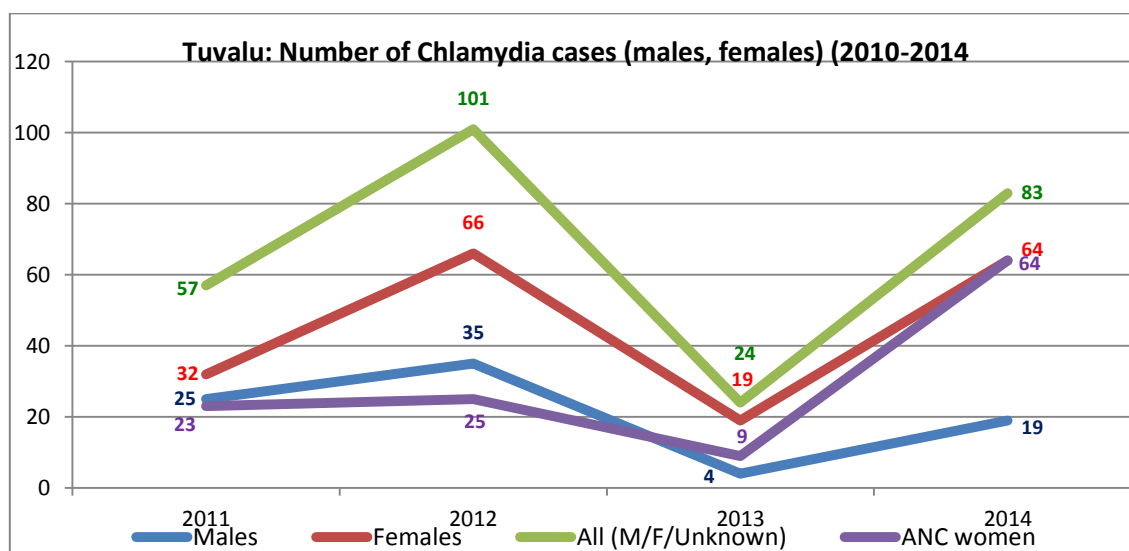


Figure 2: Total number of Chlamydia cases detected in Tuvalu among males and females (including ANC women), 2010-2014

Figure 3 shows the proportion of Chlamydia cases detected among males and females (including ANC women) who were tested. The percentages do not reflect the accurate prevalence rates among these groups, as the data is facility-based – not population-based – and is therefore affected by selection bias. However, the results for ANC women (purple line) can be considered more representative of the general female population of reproductive age and are relatively high, ranging from 11.9 percent (2012) to 15.5 percent in 2015, with an average of 13.8 percent (2010-2014). While the proportion of cases among ANC women does not show any particularly sharp increases or decreases, the proportions found among females overall (red line) and males (blue line) show a significant decrease in 2013 (5.6% and 3.7%, down from 10.0% and 7.0% in 2012 respectively).

For females the most likely explanation is that in 2013 the proportion of ANC women tested was much lower than in the other years: only one-fifth (20.7%) of all women tested in 2012 were ANC women, while most of the remaining 80 percent were tested on outer islands or at schools: while 13 percent of ANC women in 2013 tested positive for Chlamydia, only 3.7 percent of the other women were positive for Chlamydia. In other years, 59 percent of women tested were ANC women, which contributed to higher proportions of Chlamydia detected. The apparent decrease among males in 2013 is difficult to explain: however, the numbers tested were low and very few cases were found; hence the proportion found is not very significant.

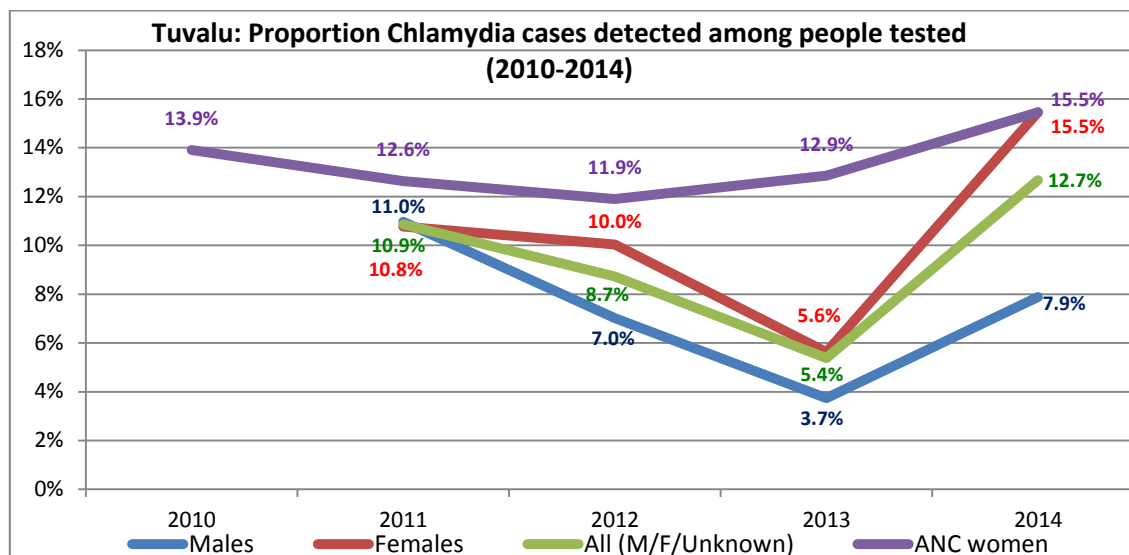


Figure 3: Proportion of Chlamydia cases detected in Tuvalu among people tested (males, females, ANC women), 2010-2014

Table 2 shows that the proportion of Chlamydia cases found is highest among ANC women (13.8%) and women overall (10.6%), and relatively low among males (7.7%). Compared to regional data, the proportion of Chlamydia cases detected in Tuvalu is considerably lower for all groups tested than the regional averages: the overall Chlamydia rate is less than half of the regional rate (9.5% vs. 21.9%); proportions of cases among females (10.6% vs. 20.5%) and ANC women (13.8% vs. 21.9%) are considerably lower, as well as among males (7.7% in Tuvalu vs. 17.8% in the region). Thus, the Chlamydia burden in Tuvalu (9.5% overall) appears to be significantly less than in other Polynesian countries such as Samoa (27.3%), Tonga (22.6%) and Cook Islands (15.6%).

Table 2: Proportion of Chlamydia cases among males & females tested, Tuvalu (2010-2015)

Country	Males	Females	ANC Women	Total M/F/Unknown)
Tuvalu	7.7%	10.6%	13.8%	9.5%

3.6.2 Gonorrhoea Statistics in Tuvalu

Table 3 shows the total number of Gonorrhoea tests reported by Tuvalu in the 2010-2015 period: Tuvalu represented only 1.1 percent of all Gonorrhoea tests in this period, with a total of 763 tests. This low number of tests is partly due to the fact that reported Gonorrhoea data for Tuvalu was not available for 2010, 2013 and 2015, while it was incomplete for 2012 (covering one half year only) and 2014 (no data on males, ANC women; only limited data on some OPD patients).

Table 3: Total No. of Gonorrhoea tests, Tuvalu, 2010-2015

Country	2010	2011	2012	2013	2014	2015	TOTAL	% of total
Tuvalu	n/a	525	226	n/a	12	n/a	763	1.1%

Figure 4 shows the number of Gonorrhoea tests among males, females, pregnant women (ANC), as well as totals for all tests (male and female) in Tuvalu for the period of 2011 till 2014: as mentioned above, no data was available for 2010, 2013 and 2015, while data was incomplete for

2012 (half year data only) and 2014 (extremely limited data). Hence, 2011 was the only year when testing data was reasonably complete. In 2011 and 2012 (most complete data), almost 60 percent of tests were conducted among females, and slightly more than 40 percent among males. Half of all Gonorrhoea tests among females (50.8%) were done among ANC women. Furthermore, less than half of all pregnant women (44%) were tested for Gonorrhoea in 2011 (data on other years is incomplete).

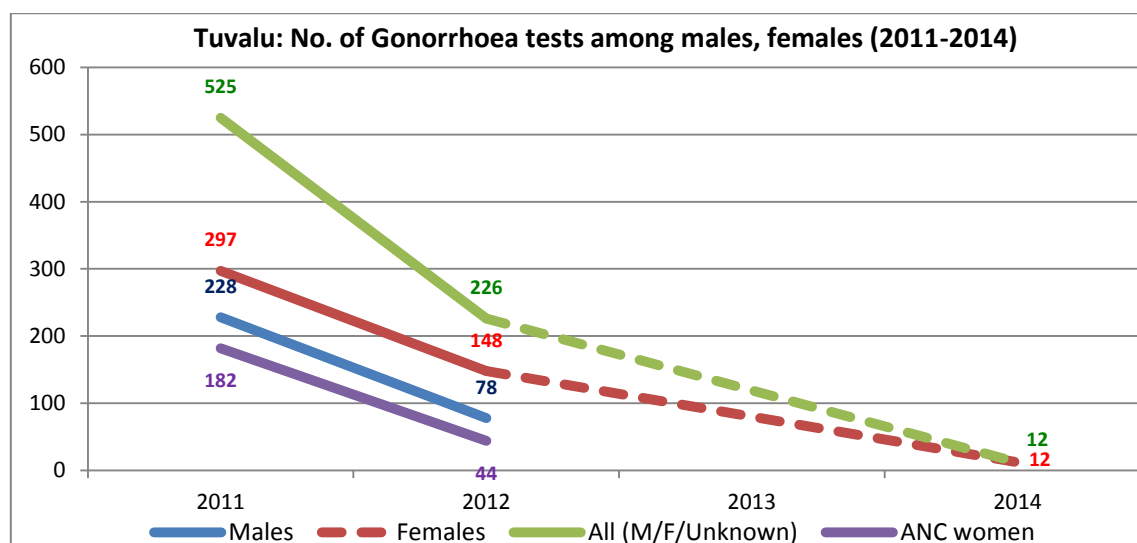


Figure 4: Total number of Gonorrhoea tests conducted in Tuvalu among males and females (including ANC women), 2011-2014

Figure 5 shows the total number of Gonorrhoea cases detected in the 2010-2015 period. As discussed, data is incomplete or missing for most years, with 2011 data being most complete. In 2011, the number of Gonorrhoea cases detected was very small among both males (n=12) and females (n=2), with only one case among ANC women. Given the lack of data on other years, no specific trends can be observed from the graph below.

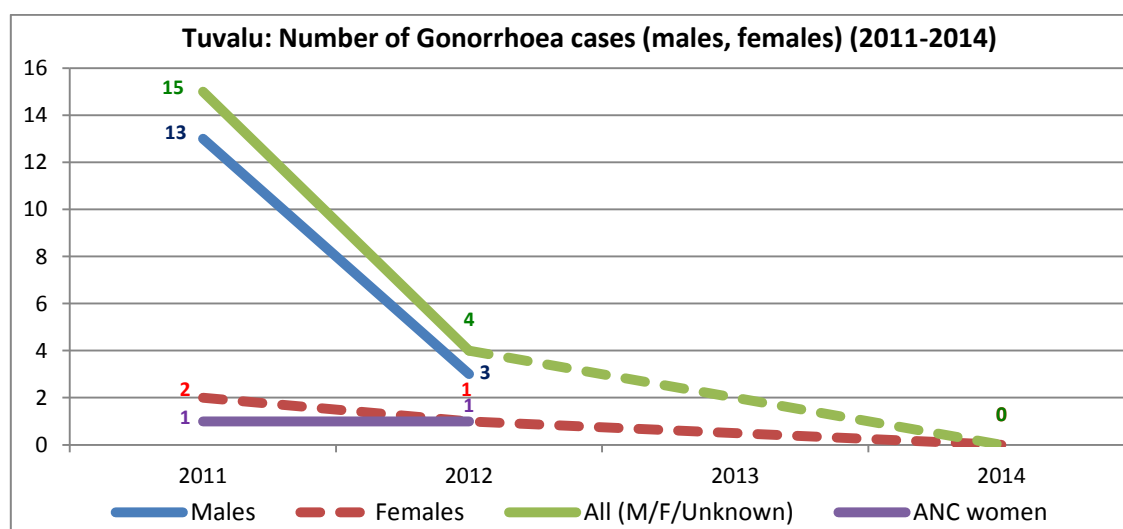


Figure 5: Total number of Gonorrhoea cases detected in Tuvalu among males and females (including ANC women), 2011-2014

Figure 6 shows the proportion of Gonorrhoea cases found among males and females (including ANC women) who were tested for Gonorrhoea in 2011-2014. A significant number of Gonorrhoea tests was done in 2011 and 2012 only, hence it is impossible to accurately interpret the percentages for other years. The percentages found for 2011 and 2012 do not reflect the accurate prevalence rates among these groups, as the data is facility-based – not population-

based – and is therefore affected by selection bias. However, the results for ANC women (purple line) can be considered more representative of the general female population of reproductive age. Overall, the proportion of Gonorrhoea cases detected among people tested is low to very low for all groups, but particularly for females overall: this group includes females tested on outer islands and in school settings, who may have lower risk profiles than ANC women. The proportion found among ANC women in 2011 was particularly low (0.55%), but increases in 2012 to 2.3 percent.

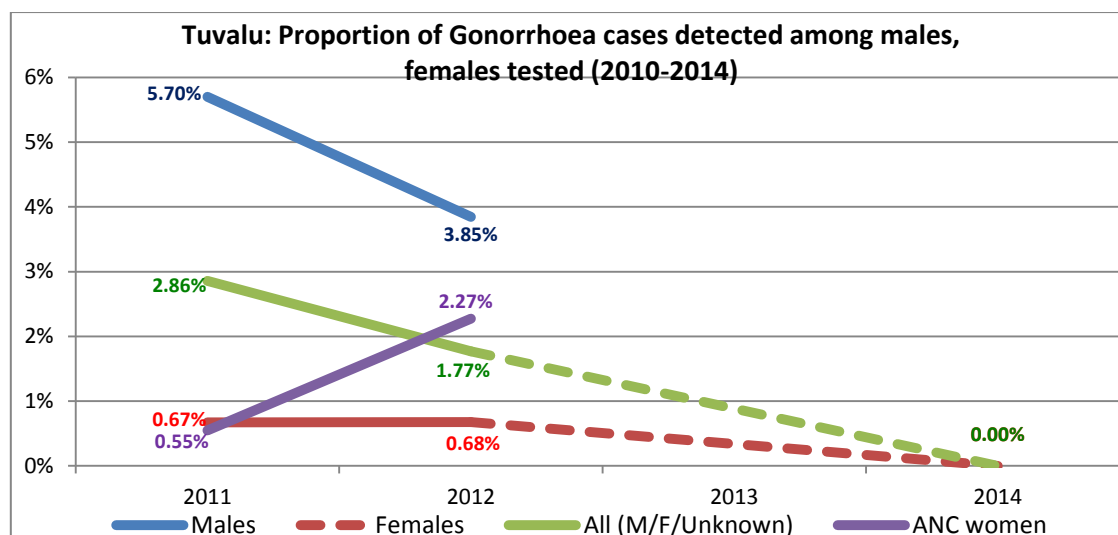


Figure TV-6: Proportion of Gonorrhoea cases detected in Tuvalu among people tested (males, females, ANC women), 2010-2014

Table 4 shows that the overall proportion of Gonorrhoea cases among people tested in Tuvalu (2.5%). This low proportion of cases is found among all populations: males (5.2% vs. 10.6%), females (0.7% vs. 2.9%) and ANC women (0.9% vs. 2.4%). However, the Tuvalu figures may be inaccurate due to the limited availability of Gonorrhoea data, with missing or incomplete data for all years, except 2011, which may give a distorted picture of the actual situation.

Table 4: Proportion of Gonorrhoea cases among males & females tested, by country (2010-2015)

Country	Males	Females	ANC Women	Total (M/F/Unknown)
Tuvalu	5.2%	0.7%	0.9%	2.5%

3.6.3 Syphilis Statistics in Tuvalu

Table 5 shows the total number of Syphilis tests reported by Tuvalu with a total of 2,638 people tested (excluding 2010, as no testing data was available for that year).

Table 5: Total No. of Syphilis tests, by country, 2010-2015

Country	2010	2011	2012	2013	2014	2015	TOTAL	% of total
Tuvalu	n/a	810	779	413	175	461	2,638	1.1%

Figure 7 shows the number of Syphilis tests conducted among males, females, pregnant women (ANC), as well as totals for all tests (male and female) in Tuvalu in the 2010-2014 period. As was observed for Chlamydia and Gonorrhoea data, data are complete only for 2011 and 2012: the

data reported for 2013-2015 covers six months for each year only, hence the actual number of tests conducted in those years is unknown. Assuming that the number of tests in those years would be twice as many, the graph would look much more stable, with an average amount of approximately 750-800 Syphilis tests per year, although considerably fewer tests were done in 2014, for unknown reasons. The proportion of tests among females and males is more or less equal, with 50.8 percent of all tests done among females, and 49.2 percent among males. Tests among pregnant women (ANC) comprise half of all tests among females (52.5%). On average, approximately 60 percent of all pregnant women are tested for Syphilis: this is in line with the proportion of pregnant women tested in countries such as RMI (57%), Samoa (61%) and Tonga (58%).

More than half (56.8%) of Syphilis tests among males are done at outpatient departments (OPD); one-fifth (21.4%) of males tested are blood donors, while smaller proportions of males tested are seafarers (9.3%), or are tested at NGO clinics (4.1%) or are inpatients (2.6%). Among females, more than half (52.5%) are pregnant women tested at ANC facilities, while almost one-third (29.5%) is tested at outpatient departments (OPD) and smaller proportions as blood donors (8%), at the TuFHA NGO clinic (6%) or as inpatient (4%).

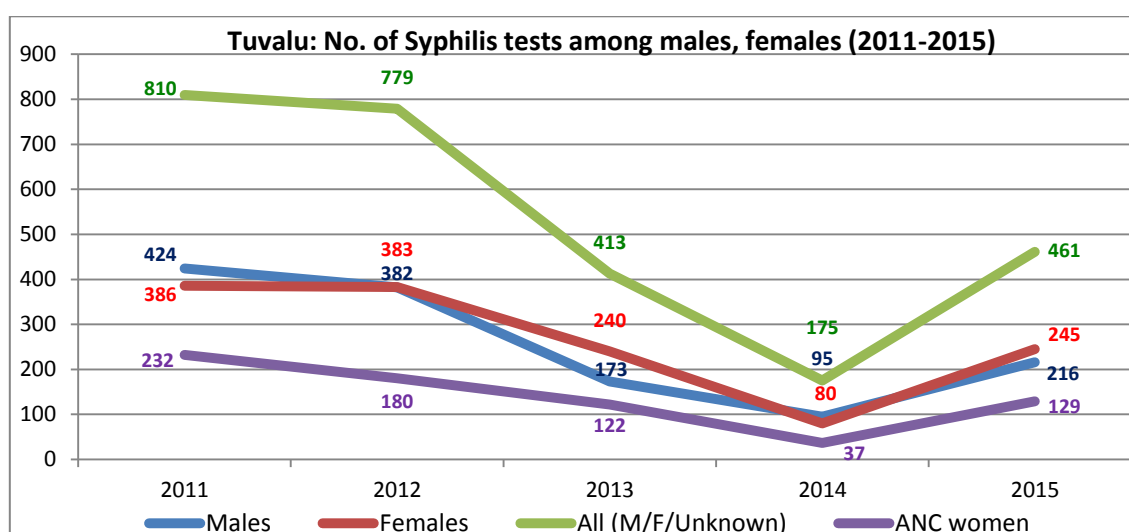


Figure 7: Total number of Syphilis tests conducted in Tuvalu among males and females (including ANC women), 2011-2015)

Figure 8 shows the total number of Syphilis cases detected among those tested in the 2010-2015 period. Overall, the number of cases is low, with on average 16 cases among males per year, 10 cases among women overall, and three cases among ANC women per year (on average). In total, 128 Syphilis cases were found in the 2011-2015 period: 78 cases among males; 50 among females, of whom 15 among ANC women. There is a remarkable increase in the number of Syphilis cases detected in 2015, which cannot be attributed to increased testing: the number of tests in 2015 (n=461) was almost the same as in 2013 (n=413), but while only one case was detected in 2013, 77 cases were found in 2015, the majority among males (n=46) and 31 among females. All 46 male cases were found among OPD patients, while 24 out of 31 female cases were also found among OPD patients. There is no clear explanation for the disproportionately large number of cases among OPD patients in 2015. Similarly, it is hard to explain the fact that only one case was found in 2013, which is extremely low compared to previous years, when 26 (2011) and 19 (2012) cases were found.

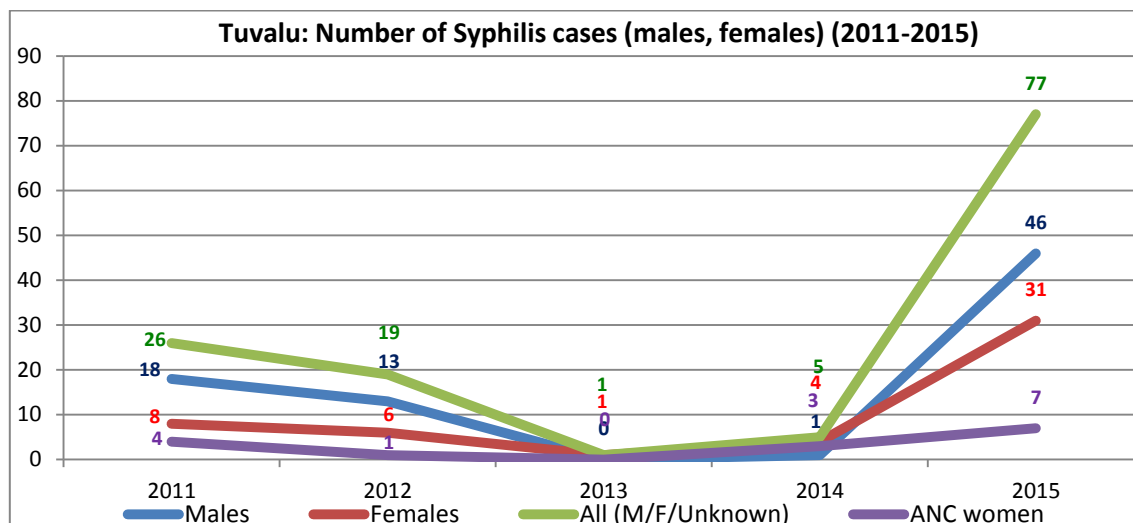


Figure 8: Total number of Syphilis cases detected in Tuvalu among males and females (Including ANC women), 2010-2014

Most Syphilis cases among males were detected at outpatient departments (68/78, i.e. 87.2%), with the remaining cases found at the TuFHA NGO clinic (n=6), among inpatients (n=2) or seafarers (n=1). No cases were found among 276 blood donors tested (21% of all males tested). Almost two thirds (32/50, i.e. 64%) of female cases are detected at outpatient departments, while most other cases are found among pregnant women at ANC facilities (15/50, i.e. 30%); two female cases were found among blood donors and one at inpatient departments.

Figure 9 shows the proportion of Syphilis cases found among males and females (including ANC women) who were tested. The percentages do not reflect the accurate prevalence rates among these groups, as the data is facility-based – not population-based – and is therefore affected by selection bias. However, the results for ANC women (see purple line) can be considered more representative of the general female population of reproductive age. As a result of the disproportionately low number of cases found in 2013 and the disproportionately high number of (male and female) cases found in 2015, the graph shows a sharp decrease in 2013, followed by a sharp increase in 2015.

The overall proportion of cases detected among all people tested (2011-2015) is 4.9 percent: among males this is 6.0 percent and among females overall 3.7 percent, while it is considerably lower among ANC women (2.1%). The highest proportion of cases are found among males at OPD (9.3% of 733 patients tested) and NGO clinics (11.3% of 53 clients tested). Among females, the highest proportion of cases was found among OPD patients (8.1% of 394 patients tested). The proportion of Syphilis cases among blood donors is very low for both males (0%) and females (1.9%). Surprisingly, among 120 seafarers – who are considered to be at high risk – only one case was found (0.8%).

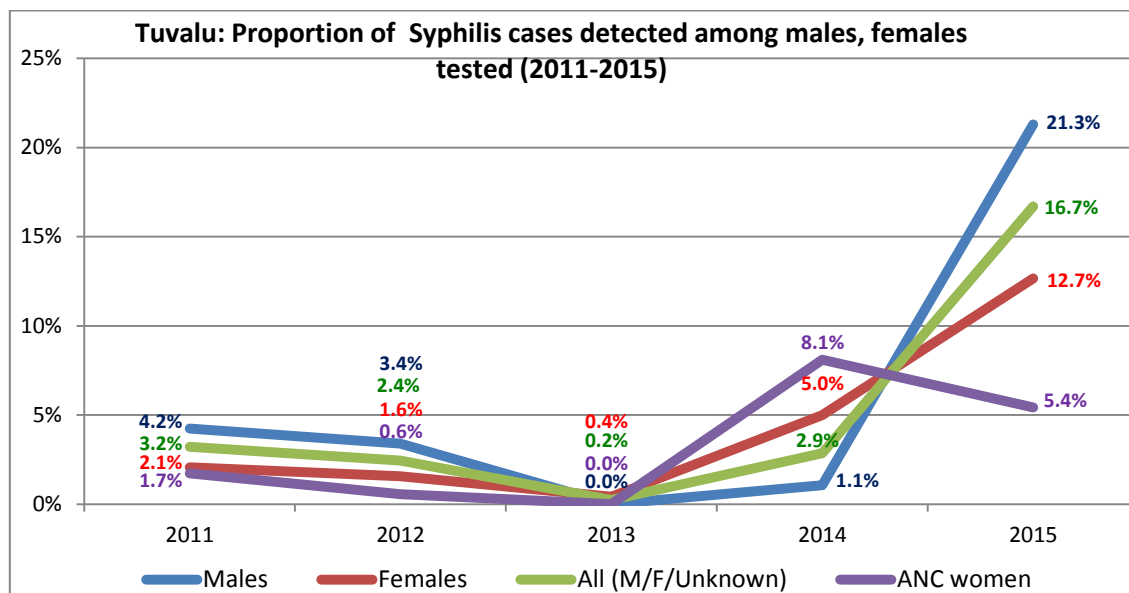


Figure 9: Proportion of Syphilis cases detected in Tuvalu among people tested (males, females, ANC women), 2010–2015

Table 6 shows that the proportion of Syphilis cases among people tested in Tuvalu compared to the regional average varies from group to group: for males it is considerably higher than the regional averages (6.0% vs. 1.9%); it is also slightly higher for all people tested (4.9% vs. 3.1%). For females overall it is almost the same (3.7% vs. 3.9%), but for ANC women the proportion of Syphilis cases among those tested is considerably lower (less than half) (2.1% vs. 4.6%).

Table 6: Proportion of Syphilis cases among males & females tested, by country (2010-2015)

Country	Males	Females	ANC Women	Total M/F/Unknown)
CNMI	n/a	0.0%	0.0%	0.3%
Cook Islands	1.0%	0.4%	0.2%	0.6%
Fiji	0.0%	0.0%	0.0%	0.0%
FSM (Micronesia)	2.1%	2.9%	2.6%	2.6%
Kiribati	3.3%	2.8%	1.0%	3.1%
Nauru	5.4%	7.9%	15.3%	6.8%
Niue	0.0%	0.0%	0.0%	0.0%
Palau	0.5%	1.2%	1.0%	0.8%
Marshall Islands	2.7%	3.7%	4.8%	3.5%
Samoa	0.2%	0.1%	0.06%	0.2%
Solomon Islands	21.1%	10.8%	10.7%	10.4%
Tonga	0.07%	0.06%	0.03%	0.06%
Tuvalu	6.0%	3.7%	2.1%	4.9%
Vanuatu	5.3%	3.7%	3.5%	5.8%
Total all countries	1.9%	3.9%	4.6%	3.1%

3.6.4 HIV statistics Tuvalu

Voluntary counselling and testing (VCT) is current practice in Tuvalu for all HIV testing. The country's Only laboratory, at Princess Margaret Hospital in Funafuti, is capable of doing HIV Determine and Serodia diagnostic tests. There is no testing available in outer islands. VCCT is performed by certified HIV Counsellors following an HIV Testing Policy for confidential counselling services. Upon consent, a HIV test is performed at PMH. An average number of 791 tests were performed in 2013 for HIV testing with no HIV positive cases registered.

Confirmatory tests, however, are still being sent to Fiji and/or Melbourne, Australia. This process can take weeks (Fiji) and months (Australia) and causes difficulties in the return of results, which can have a significant effect on the management of a case. Apart from voluntary testing, the laboratory also performs screening of all blood products for HIV and other common STIs. The current national policy on HIV testing supports voluntary counselling and testing.²

Seafarers account for most of Tuvalu's HIV cases (7-8 out of 11), while 2 other cases are an infected wife of a seafarer and her child. Thus nearly all HIV cases are linked to the seafarer community. In Tuvalu, there are no known people who inject drugs, nor known sex workers; however, there is anecdotal evidence of informal transactional sex.

Many young men in Tuvalu seek employment on overseas ships as it enables them to visit other countries. The nature of their work and the long periods of time away from their wives and families puts them at increased risk of contracting HIV and STIs. The period of absence from Tuvalu for seafarers ranges from seven months to 15 months and averages 12 months. Many women in Tuvalu are married to seafarers and are therefore at increased risk of contracting HIV and STIs when their husbands return from overseas (MOH Tuvalu, 2012). Behavioural surveys in the past few years among seafarers and young people have highlighted risk behaviours. Of the 209 seafarers covered by the a bio-behavioural (IBBS) survey in 2005, only 28% had correct knowledge of HIV prevention methods, while only 17% had both correct knowledge of HIV prevention and no incorrect beliefs about HIV transmission. While none of the seafarers in the study were HIV-positive, other STI rates were high: Chlamydia 8%; Hepatitis B 13%; and Syphilis 5% (MOH Tuvalu, 2012). Consistent condom use was reported as low between seafarers and all of their partners. Among seafarers with any STI, 57% reported using condoms during sex with a sex worker and 16.6% with a casual partner. Seafarers may play a key role in the spread of HIV and other STIs in Tuvalu as they have unprotected sex with partners overseas and also with regular partners in Tuvalu (MOH Tuvalu, 2012)..

In the same 2005 IBBS study, young people aged 15-24 had better knowledge of HIV and AIDS than seafarers: 84% had correct knowledge of HIV prevention and no incorrect beliefs about HIV transmission. The study also found that 43% of young people (14% of girls) were sexually active before the age of 18. While few youth reported sexual contacts with sex workers, nearly 14% of male respondents acknowledged having had sex with a male partner at some time in their life, and 8% said they had sex with a male partner during the previous 12 months. In addition, social change in Tuvalu has seen an increase in alcohol abuse among youths, teenage pregnancies and the number of young people engaged in risky sexual behaviours, particularly on the main island of Funafuti. (MOH Tuvalu, 2012)

Tuvalu Maritime Training Institute (TMTI) trains the young men who become seafarers in Tuvalu. The school runs an 18 months intensive course on seafaring which includes a comprehensive health subject specifically designed modules to educate them on HIV and STIs. The curriculum has been in place since 1999 and is taught by the clinical nurse based at TMTI. Seafarers who missed out on this opportunity were given refresher courses on HIV and STI organized by the Tuvalu Overseas Seaman Union (TOSU), Tuvalu Red Cross (TRC) with support from the Ministry of Health.

² Tuvalu NSP 2009-2013

Tuvalu Family Health Association (TUFHA) is a member of TUNAC and has been associated with HIV activities since the late 1980s and has been most active in the area of education and awareness and IEC development targeting young people in the country. Initially mandated for the provision of family planning services in its early days, TUFHA has since expanded its services to providing sexual and reproductive health services, including youth friendly services, counselling and clinical services which include HIV and STI referrals^v.

Other stakeholders include the faith-based organizations, Tuvalu National Council of Women, Tuvalu Association for Non-governmental Organizations, Tuvalu Media Corporation, Ministry of Finance, Ministry of Education and Tuvalu National Youth Council.

Table 7 shows the total number of HIV tests reported by Tuvalu in the 2010-2015 period with a total number of HIV tests reported in Tuvalu (2011-2015) of 2,826.

Table 7: Total No. of HIV tests, by country, 2010-2015

Country	2010	2011	2012	2013	2014	2015	TOTAL	% of total
Tuvalu	n/a	826	860	406	322	412	2,826	1.6%

Figure 10 shows the number of HIV tests among males, females, pregnant women (ANC), as well as totals for all tests (male and female) in Tuvalu. As was observed for Syphilis data, data are complete only for 2011 and 2012: the data reported for 2013-2015 covers six months for each year only, hence the actual number of tests conducted in those years is unknown. Assuming that the number of tests in those years would be twice as many, the graph would look much more stable, with an average amount of approximately 800 HIV tests per year, although considerably fewer tests were done in 2014, for unknown reasons. Slightly more tests are done among females (52.7% of tests) than among males (47.3%). Pregnant women tested at antenatal (ANC) facilities represented half (51.7%) of all females tested. Only about half (51%) of all pregnant women were tested for HIV at ANC services in Tuvalu: this percentage is comparable to Tonga (52.1% of pregnant women tested for HIV), but significantly more pregnant women are tested for HIV in Palau (90%), Cook Islands and FSM (both 80%).

More than half (57.1%) of HIV tests among males are done at outpatient departments (OPD); one-fifth (20.8%) of males tested are blood donors, while smaller proportions of males tested are seafarers (9.5%), or are tested at NGO clinics (4.1%) or are inpatients (3.4%). Among females, more than half (55.6%) are pregnant women tested at ANC facilities, while one-third (34%) is tested at outpatient departments (OPD) and smaller proportions as blood donors (8%), at the TUFHA NGO clinic (3%) or as inpatient (4%). These percentages are almost the same as for Syphilis testing, as HIV and Syphilis testing is mostly combined.

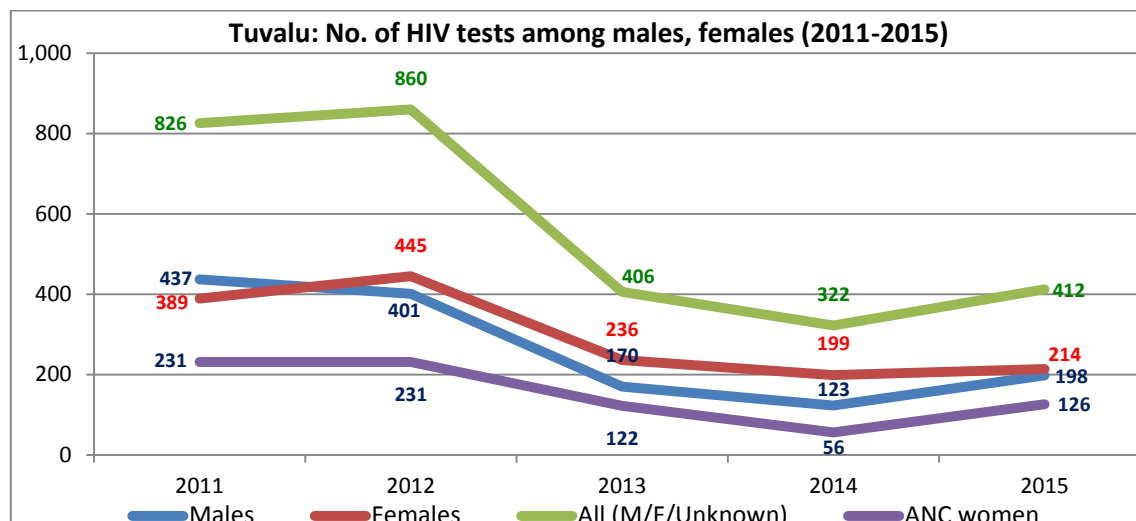


Figure 10: Total number of HIV tests conducted in Tuvalu among males and females (Including ANC women), 2010-2015

As mentioned above, only 11 HIV cases had been identified in Tuvalu by the end of 2012. The three cases detected in 2015 bring the total to 14 HIV cases. The three cases in 2015 were found among male OPD patients (n=1) and 2 pregnant women tested at ANC facilities.

With only about 7 percent of the total population tested each year, it is likely that existing HIV cases remain undetected. Nevertheless, with only 3 cases detected in the last five years out of 2,826 people tested (0.18%), the HIV prevalence rate is likely to remain extremely low in Tuvalu.

4. Key populations at risk

Seafarers account for most of Tuvalu's HIV cases by the end of 2012 (7-8 out of 11), while two other cases are an infected wife of a seafarer and her child. Thus nearly all HIV cases are linked to the seafarer community. In Tuvalu, there are no known people who inject drugs, nor known sex workers; however, there is anecdotal evidence of informal transactional sex.

Many young men in Tuvalu seek employment on overseas ships as it enables them to visit other countries. The nature of their work and the long periods of time away from their wives and families put them at increased risk of contracting HIV and STIs. The period of absence from Tuvalu for seafarers ranges from 7-15 months and averages 12 months. Many women in Tuvalu are married to seafarers and are therefore at increased risk of contracting HIV and STIs when their husbands return from overseas (MOH Tuvalu, 2012). Behavioural surveys in the past few years among seafarers and young people have highlighted risk behaviours. Of the 209 seafarers covered by the a bio-behavioural (IBBS) survey in 2005, only 28 percent had correct knowledge of HIV prevention methods, while only 17 percent had both correct knowledge of HIV prevention and no incorrect beliefs about HIV transmission. While none of the seafarers in the study were HIV-positive, other STI rates were high: Chlamydia 8%; Hepatitis B 13%; and Syphilis 5% (MOH Tuvalu, 2012). Consistent condom use was reported as low between seafarers and all of their partners. Among seafarers with any STI, 57 percent reported using condoms during sex with a sex worker and 16.6 percent with a casual partner. Seafarers may play a key role in the spread of HIV and other STIs in Tuvalu as they have unprotected sex with partners overseas and also with regular partners in Tuvalu (MOH Tuvalu, 2012).

In the same 2005 IBBS study, young people aged 15-24 had better knowledge of HIV and AIDS than seafarers: 84% had correct knowledge of HIV prevention and no incorrect beliefs about HIV transmission. The study also found that 43% of young people (14% of girls) were sexually active before the age of 18. While few youth reported sexual contacts with sex workers, nearly 14% of male respondents acknowledged having had sex with a male partner at some time in their life, and 8% said they had sex with a male partner during the previous 12 months. In addition, social change in Tuvalu has seen an increase in alcohol abuse among youths, teenage pregnancies and the number of young people engaged in risky sexual behaviours, particularly on the main island of Funafuti. (MOH Tuvalu, 2012)

In the 2007 a SGGS study was conducted in Tuvalu in pregnant women, seafarers, young male having sex with male and youth.

HIV was not detected among pregnant women attending antenatal clinic and seafarers in this study. Chlamydia was the most common STI in women (17.5%), while 8.0% in seafarers. Hepatitis B was most common among seafarers (13.4%) while 9.8% among pregnant women. Syphilis and gonorrhoea were unexpectedly lower in some populations, 5.2% and 0.5% among seafarers and 0.9% and 1.7% among pregnant women respectively. Among pregnant women, the risk of infection with chlamydia increased when onset of sex was below the age of 18 (OR=1.20: p=0.83), having more than one lifetime partner (OR=1.13: p=0.84), and a higher education level (OR=1.4: p=0.63) and living in urban Funafuti (OR=1.20: p=0.83).

Condom use was low (29.8%) despite good knowledge on HIV transmission (MTCT) reported by 98.2% of women. Among seafarers, age was associated with an increased risk of acquiring any STI for those below 25 years (OR=1.55: p=0.36) and hepatitis B infection (OR=2.10: p=0.25). The risk of chlamydia was increased three-fold when condoms were not used (OR 3.12: p=0.06) and when using alcohol (OR=1.50: p=0.45). None was ever engaged in injecting drug use. Knowledge was generally poor among seafarers, contributing to an increased risk (Table 14). Youths are sexually active (43.6%) but only 20.3% used a condom at first sex. Many male youths (13.9%) reported having sex with another male, but only 3 reported having sex with a commercial partner. HIV knowledge was generally good but didn't quite transform into safer behaviours in this study. Alcohol use was high (41.6%) but none was injecting drugs.

The impact of such a result on a small island nation will have implications on the spread of HIV should the interpretation of this result be misleading reversing the general feeling about HIV in Tuvalu to that of a low risk country, i.e. creating a false sense of security. However, despite HIV not having been detected, the STI picture remains a clear indicator suggesting a community at risk of the introduction and spread of HIV infection.

The high prevalence rate of bacterial STIs among pregnant women is of great concern, especially in a population of women believed to be low risk. Chlamydia was detected in 17.5% of 114 pregnant women attending the antenatal clinic in Tuvalu.

Among pregnant women infected with chlamydia nearly half (45%) were married to or partnered to a seafarer.

Condom use among pregnant women was low. The result is quite expected since all women in this study are pregnant and were unlikely to use condoms even within the last 12 months. The survey results gave very low levels of concurrent partners (1.8%) in last 12 months and none reported having sex in exchange for money or gifts. Only 1.8% reported having more than 1 sexual partner. Whether there is an element of under reporting, it is not fully understood in this study. There is the possibility that in a small community like this in Tuvalu where investigators are known to the sample of women being questioned creates an environment where bias is likely to occur.

Figure 5. Baseline prevalence of sexually transmitted infections among 114 pregnant women attending Princess Margaret Hospital antenatal clinic, Funafuti, Tuvalu, from August 2005 to February 2006.

	<i>Number Tested</i>	<i>Number with Infections</i>	<i>Prevalence percent</i>	<i>95% CI</i>
Chlamydia	114	20	17.5	11.3 , 26.2
Gonorrhoea	114	1	0.9	0.0 , 4.9
Syphilis	114	2	1.7	0.2 , 6.3
Hepatitis B	114	11	9.6	5.0 , 16.9
HIV	114	0		

HIV seroprevalence in seafarers was zero. Despite this the detection of bacterial STIs suggested that the seafarer population is vulnerable to the introduction and rapid spread of HIV infection in Tuvalu. Seven out of ten confirmed cases of HIV-positive cases in Tuvalu were seafarers. However with a population of only 9600, the rate of infection is close to that of French Polynesia (Tahiti) and Guam, which have some of the highest numbers of HIV infection in the Pacific outside of Papua New Guinea. The low seroprevalence in this study could be due to the low prevalence of bacterial STIs among Tuvaluan seafarers. Sullivan et al (2003) reported on similar findings in a study in Kiribati [49]. The other important factor which may contribute to the low HIV prevalence is the absence of injecting drug use among seafarers in Tuvalu.

Figure 6. Baseline prevalence of STIs and HIV among 209 seafarers attending Princess Margaret Hospital, Funafuti, Tuvalu from August 2005 – February 2006

	<i>Number Tested</i>	<i>Number with Infections</i>	<i>Prevalence percent</i>	<i>95% CI</i>
Chlamydia	209	17	8.1	4.8 , 12.6
Gonorrhoea	209	1	0.5	0.0 , 2.6
Syphilis	209	11	5.2	2.6 , 9.2
Hepatitis B	209	28	13.4	9.0 , 18.7
HIV	209	0	0	0

Consistent condom use was reported low between seafarers and all their partners. Among those infected with any STI, 57% were using condoms when having sex with a commercial partner and 16.6% with casual partner. On their return to Tuvalu, these men engage in unprotected sexual contact with their regular partners, increasing the risk of transmission of any STIs three-fold in this population. Seafarers are therefore important bridges for the spread of STIs and potentially HIV into Tuvalu. They have unprotected sex with partners overseas and also with regular partners in Tuvalu. Seafarers are therefore an important population for targeted interventions in this study.

In this survey, 43.6% of the respondents reported having had sex already but few (20.3%) used a condom at their first sexual contact. Sex with commercial partners was reported by a three male youths with all using condoms consistently. Sex with non-commercial partners was reported by 112 youths both male and females, but consistent condom use was much lower (11.6%). These findings were similar to BSS surveys conducted in other Pacific Island countries [29]. UNAIDS/WHO reported that other factors that increase the probability of HIV and other STI transmission during unprotected sex among young people include sexual violence, forced sex and biological factors such as untreated STIs and males not being circumcised. However these are not thought to be common in Tuvalu.

Sex between male youths was reported in 13.9% of males in this study, with just two thirds of them using condoms. Anal sex within the last 12 months occurred in 8.0%. BSS of male youths in Solomon, Vanuatu and Samoa also found male-to-male sex in young people. There is limited knowledge into the attitudes, sexual practices and risk behaviours of this minority group in the Pacific. Buchanan et

al (2007) reported that societal and religious stigma and discrimination, laws that criminalize homosexuality, physical violence and emotional abuse directed at these minority groups not only violate their human rights but make it more difficult to identify them^{vi}.

4.1 Testing in pregnant women

There are 8 ANC facilities in Tuvalu, one for each island except for the island of Niulakita which has a population of 41. 241 births were recorded by ANC in 2010. There is 100% ANC and skilled delivery coverage in Tuvalu. All standard routine tests are done for mothers on their first booking. They are then referred for VCCT which is offered by a group of certified counsellors. HIV screening services for pregnant women is offered by TUFHA and PMH. However ART is provided by PMH only. Zero cases of HIV positive pregnant women have been reported in the period 2010-13. Tuvalu does not have a PMTCT/ PPTCT policy at this stage, but work has begun on drafting this. PMH is a baby friendly hospital and implements the Breastfeeding policy.

A total number of **286** pregnant women have been registered in Tuvalu with **286** having an HIV test. This is a routine check for all pregnant mothers.

4.2 ART Treatment, Care and Support

Currently there are no HIV patients in ART in Tuvalu out of 11 PLHA registered.

Oceania Society for Sexual Health and HIV Medicine (OSSHM) Guidelines 2010- 2011 revised version is used for ART treatment. There are no cases of HIV- TB co-infection but OSSHM guidelines are in place for patient management, should a case is diagnosed. Only the Director for Ministry of Health provides treatment for HIV positive persons.

A HIV Clinical Team has been set up at Princess Margaret Hospital to look after people living with HIV and AIDS. This clinical team, consisting of three senior doctors, two senior nurses, a nurse from TUFHA, and a pharmacist, has been trained to fully implement the national anti-retroviral therapy (ART) guidelines endorsed by the Ministry of Health in 2004. Antiretroviral treatment commenced in December 2007 and as of mid-2008, there is just one person undergoing ART. The HIV clinical team is in the process of developing broader care and support systems for people living with HIV and AIDS in Tuvalu.

Syndromic management of STIs is currently used for the treatment of all STIs in Tuvalu. The protocols are available at all medical centres on the outer islands. Syphilis cases that are detected at PMH are treated according to WHO standard protocols.

5. Eliminating gender inequalities

5.1 Gender and Women

The constitution of Tuvalu provides for gender equality in education. Correspondingly there are no significant differences between females and males in the education system, and females are perceived to perform better than males. A literacy rate of 99% has been achieved for both boys and girls in primary and secondary education. However, there are social pressures that discourage women from obtaining education and training at post-secondary levels. Only a third of post-secondary scholarships are awarded to women. There is a widespread belief within the Tuvalu

society that women studying and working abroad are likely to find their partners abroad and thus, would not return.

Gender disparities exist in participation in the labour force, land tenure, and inheritance practices. Although formal policies and laws provide for gender equality, women in Tuvalu in general cannot inherit land. According to the “Beijing+10” the Department of Women’s Affairs reports that the banking system offers equal financial services to men and women. Between 2004-2005 the number of women that obtained a credit from the Development Bank of Tuvalu increased from 16 to 30% compared to the number of credit given to men, which increased from 31 to 41%. However, the total loan approval rate is still lower for women at 37% compared to men at 63%, and the total loan value for men accounts for 74% of the total credit given.

Significant gender disparities exist in political participation at the national level. Although one woman was elected to the Parliament in 1990s, none of the 15 parliamentary seats today is held by a woman.

Tuvalu ratified the Convention on Elimination of All Forms of Discrimination against Women in 1999, and is a signatory to the Beijing Platform for Action and the Pacific Platform for Action. In addition, the Department of Women’s Affairs within the Ministry of Health and the Tuvalu National Council of Women strongly advocates for equality and empowerment of women in decision making levels. The majority of women in Tuvalu are married to seafarers. These women are thereby at an increased risk of contracting HIV and STIs. Most are not aware of the need to screen their husbands on their return from overseas. The only screening available to these women is during pregnancy when they will undergo routine serology for treponemal antibodies, hepatitis B surface antigen and HIV, none for chlamydia. There is a current plan for a national cervical screening program to include STIs but this is still in the pipeline.

The majority of pregnant women in the 2007 SGGS have partners working as seafarers (38.5%) and Government workers (18.4%), the two most mobile populations in terms of travelling within and out of the country compared to other types of partners in Tuvalu. Among pregnant women infected with chlamydia nearly half (45%) were married to or partnered to a seafarer. There is the likelihood that these women were reinfected from their seafarer husbands. Miller JM (1998) identified maternal age below 20 years as the only risk factor associated with the likelihood of recurrent chlamydial infection, a possibility in this cohort. There is also the possibility that women left behind at home may infect their husbands upon their return home. Lurie et al (2003) concluded that the direction of spread of the epidemic is not only from returning migrant men to their rural partners, but also from women to their migrant partners, and therefore their recommendations for prevention efforts to target both migrant men and women who remain at home.

Only 57% of currently married women and almost 93% of currently married men were employed at some time in the year prior to the 2007 TDHS. More women than men in the 25–34 age group are employed. The low employment rate at young ages is expected because part of the labour force in those ages are students at secondary and higher learning institutions who are therefore not available for work. For those who are working, most women and men are likely to be paid in cash (85% women, 71% men). Men are more likely to do any type of work without any payment (23%) than women (4%). In contrast, women are more likely to be paid in cash and in-kind (9%) than men (1%).

The 2007 TDHS included questions that addressed women’s control over their own earnings and also those of their husbands. This information may help provide further insight into women’s direct empowerment within the family and their indirect empowerment within the community. Over two in five women (44%) are more likely to decide mainly for themselves how their cash earnings are used if their husband or partner has no earnings or did not work in the preceding 12 months (see Table 13.4). The same proportion of women (44%) also reported to make joint decisions with husband or partner. Women are more likely to make joint decisions with their

husband or partner about the use of their earnings if they earn more than their husband or partner. Meanwhile, almost the same proportion of women and men make joint decisions about the use of wife's and husband's cash earnings regardless of who earns more than the other. About 50% of women who did not work in the 12 months preceding the survey reported that they jointly decided with their husband or partner on how to use his cash earnings.

Violence against women has serious consequences for their mental and physical well-being, including their reproductive and sexual health (WHO 1999). One of the most common forms of violence against women worldwide is physical abuse by a husband or partner (Heise et al. 1999). The 2007 TDHS gathered information on women's attitudes toward wife beating, which is a proxy for women's perception of their status. Women who believe that a husband is justified in hitting or beating his wife for any specified reason may believe themselves to have a low status, both absolutely and relative to men. Such a perception acts as a barrier to accessing health care for themselves and their children, affects their attitude toward contraceptive use, and impacts their general well-being. Women were asked whether a husband is justified in beating his wife under a series of circumstances: 1) if the wife burns the food; 2) argues with him; 3) goes out without telling him; 4) neglects the children; and 5) refuses sexual relations. Table 13.9 summarises women's attitudes toward wife beating in these five specific circumstances.

Most women find wife beating justified in certain circumstances. For example, 70% of women agree that at least one of the five reasons is sufficient justification for wife beating. This indicates that Tuvaluan women generally accept violence as part of male-female relationships, which is not surprising because traditional norms teach women to accept, tolerate and even rationalise battery. The most widely accepted reasons for wife beating are: neglecting the children (66%), going out without informing the husband or partner (42%), and arguing with the husband or partner (28%). About 21% of women feel that burning the food is also a justification for wife beating, as is denying a husband sex (18%).

Acceptance of wife beating for at least one of the specified reasons is generally lower among: 1) women in the outer islands; 2) women with more than a secondary education; 3) women who are not married and women who are married; and 4) women who have more than five children. Men were also asked about their opinions on the justification of wife beating under certain circumstances. More than seven in ten men (73%) agree that wife beating is justified for at least one of the specified reasons. It is interesting to note that this is about the same as the percentage of women who agreed with at least one of the reasons. The results also show similar proportions of men and women justifying reasons for wife beating.

The most likely groups of men to agree with at least one of the specified reasons for wife beating include: 1) younger men, those who are employed but not for cash; 2) men who are not married; 3) men with one and two children; 4) men living in Funafuti; 5) men who have no education or only a primary level education; and 6) men in the lowest wealth quintile households. Men with more than a secondary education (35%) are the least likely to accept wife beating. A higher educational attainment tends to decrease the chances that a man will agree with any of the reasons for wife beating.

The 2007 TDHS included questions about whether a woman is justified in refusing to have sexual relations with her husband if she: 1) knows the husband has an STI; 2) knows the husband has intercourse with other women; and 3) is tired or not in the mood. These three issues have been addressed because they are related to women's rights and health. About 81% of women agree that a wife is justified in refusing to have sex with her husband for all of the specified reasons. Of these, 94% believe that a wife is justified in refusing to have sex if she is tired and 91% believe that a wife is justified in refusing to have sex if she knows her husband has sexual relations with other women. An estimated 88% of women believe that a wife is justified in refusing to have sex if her husband has an

STI. Very few women disagree with any of the specified reasons. Young women, women who are unemployed, single women and women with no children are the least likely to agree that a wife is justified in refusing to have sex with her husband for any reason.

The percentage of men who believe that a wife is justified in refusing to have sex with her husband under these same specific circumstances. The same proportions of men and women agree on all specific circumstances, except that men are more likely to agree that a wife is justified in refusing to have sex with the husband when she knows that he has an STI. The least likely group of men to agree with all of the reasons for a wife refusing to have sex with her husband include single men, men with no children, men who live in Funafuti, men with a higher education and men living in the highest wealth quintile households.

About 52% of men aged 15–49 believe that a husband has the right to get angry and reprimand his wife if she refuses to have sex with him. Nearly equal proportions of men (less than 16%) believe they have the right to: 1) force their wife to have sex; 2) refuse their wife financial support; and 3) have sex with another woman if their wife refuses to have sex. Single men and men living in Funafuti are the least likely to agree that a husband has a right to certain behaviours when his wife refuses to have sex with him. However, education and wealth quintile show a negative correlation against all of the specified behaviours.

Out of the total 501 women interviewed, about 37% have ever experienced physical violence any time since the age of 15, while nearly 25% reported having experienced physical violence in the 12 months preceding the survey. About 1% of women have frequently experienced physical violence, while 23% have experienced violence sometime in the 12 months preceding the survey. The proportion of women who have experienced physical violence is highest among women aged 20–29. Moreover, women aged 25–29 are most likely to report having experienced physical violence often or sometimes in the 12 months preceding the survey (35%). Although there is very little difference between employed and unemployed women with regard to their experience of physical violence, women who are unemployed are slightly more likely to report having experienced physical violence since age 15.

Employed women are more likely to experience physical violence (25%) often in the 12 months preceding the survey than women who are unemployed compared to (23%). Women who are married or in a living together arrangement are slightly less likely to have ever experienced physical violence (37%) than women who are currently divorced, widowed or separated (38%). The pattern for recent violence suggests that women with partners are more likely to experience violence currently (22%) than women who are currently divorced, widowed or separated in the past 12 months (25%). The number of children that women have is also related to their experience of physical violence. Women with no or few children are more likely to experience physical violence since age 15 and in the past 12 months than women with more children.

Physical violence is higher among women in Funafuti (38%) than among women in the outer islands (36%). Women in Funafuti are also more likely to have experienced physical violence in the 12 months preceding the survey, and are more likely to have experienced it often during that time. Women with less than a secondary education are slightly more likely to have experienced physical violence than women with a secondary education or more than a secondary education. Although women with a secondary education and those with more than a secondary education are equally likely to have ever experienced physical violence, women with a secondary education are much more likely to have experienced physical violence (29%) in the 12 months preceding the survey than women with more than a secondary education (24%). Women with more than a secondary education and women with less than a secondary education are also less likely to have experienced physical violence in the 12 months preceding the 2007 TDHS (24% and 19%, respectively). There is no clear pattern by wealth quintile of women ever experiencing physical violence; however, Table 14.1 indicates that women in the highest and fourth highest wealth quintiles are less likely to

experience physical violence in the 12 months preceding the survey than women in other wealth quintiles. Among women who have ever experienced physical violence and among women who have experienced sexual violence. Among women who have experienced physical violence since age 15, 90% reported that a current husband or partner committed physical violence against them, while 8% reported that they experienced violence by a sister or brother. Other perpetrators commonly reported by women are other relatives (5%), former husbands/partners and 'others' (4.5% each).

5.2 Third gender

The indigenous cultures of the South Pacific were at one time and in many cases still are, among the most isolated in the world. Prior to their discovery by Europeans from the sixteenth to the eighteenth century, these societies had little if any contact with outside civilizations, including Tuvalu. The vast regions include Australia, New Guinea, New Zealand and all of the various Polynesian islands of the Pacific Ocean.

When the Europeans first explored the South Seas they found large, thriving settlements along many of the islands coastlines. Some of the more inhabited islands such as Tahiti and Hawaii, had populations of up to two hundred thousand and were comparable in size with many European and American towns of the same period. Within these communities, homosexual and transgender natives were well documented by early French and British explorers such as Louis de Bougainville, James Cook, William Bligh and others.

Third gender natives were evident in all major Polynesian islands including Tonga, Tahiti, Fiji, New Zealand, Hawaii, Samoa, Tuvalu, and Vanuatu and to a lesser degree among dark-skinned aborigines that formed smaller tribes along the coasts of Australia and New Guinea. In Polynesia, European Explorers were surprised to encounter societies that had long regarded bisexual, homosexual and transgender conduct as normative. Third-gender natives were common on all of the islands and known by different names. In Tahiti, for instance, male-to-male transgenders that lived and behaved as women were called mahu. In Hawaii Islands, whose inhabitants are believed to have originated from Tahiti, the mahu were also present along with the aikane – sexually related or “friendly” men that were essentially masculine-type homosexuals and bisexuals.

In Tuvalu, the word pinapinaaine substitutes for mahu, as does the word fa’afafine (like a woman) in Samoa and fakafafine in Tonga. All these various terms referred to the different types of transgender and homosexual men found among the South Sea natives. Polynesian mahu lived and worked alongside the women and excelled in traditionally female tasks such as basket weaving. They did not perform castration but instead tied their genitals up tightly against the groin. Both mahu and aikane were known for their talent in the elaborate dance ceremonies performed throughout the islands. Bisexuality was quite common in Polynesia and many islands kings kept both male and female partners in their royal huts for intimate relations. Lesbians were less reported in the South Sea although early British ethnographers observed such women in several of the western islands such as Vanuatu.

Nowdays transgender population in Tuvalu is often seen, however there are no studies about their behaviours and risks.

6. Stigma associated with HIV

Respondents of the DHS 2007 who had ever heard of HIV and AIDS were asked four questions to measure attitudes toward people living with HIV and AIDS: 1) willingness to care for a family member with HIV in the respondent's home; 2) willingness to buy vegetables from a shopkeeper who has HIV; 3) opinion of whether a female teacher with HIV, but who is not sick, should be allowed to continue teaching; and 4) preference for keeping it secret that a family member is infected with HIV.

Table 12.6 shows the proportions of women with accepting attitudes toward each of the four questions, and for all four questions by age group, marital status, and education level and wealth quintile. Accepting attitudes were highest for the indicators 1) willingness to care for a family member with HIV (81%); 2) not wanting to keep it a secret that a family member has HIV (64%); and 3) a female teacher with HIV should be able to continue teaching (64%). Accepting attitudes were lowest for the indicator buying fresh vegetables from a shop keeper with HIV (57%). The combined percentage of accepting attitudes for all four indicators was 31% for women aged 15–49. More women who are married or in a living together arrangement (82%) are willing to care for a family member with HIV than women who have never married (78%). Women's attitudes towards those living with HIV are no different in the outer islands than in Funafuti. However, educated women with more than a secondary education are more accepting with regard to all four indicators (43%) than women who have less than a secondary education (29%).

Table 12.7 shows the proportions of men with accepting attitudes toward the four questions and for all four questions by age group, marital status, and education level and wealth quintile. Accepting attitudes of men towards those living with HIV are highest for the indicators willing to care for a family member (86%) and not wanting to keep it a secret that a family member has HIV (72%). Accepting attitudes are lowest for the indicators willing to buy fresh vegetables from a shop keeper with HIV (67%) and a female teacher with HIV should be able to continue teaching (66%). The combined percentage expressing accepting attitudes toward all four indicators was 31% for all men aged 15–49.

The majority of men who are married or in a living together arrangement (88%) are more willing to care for a family member with HIV than those who have never married (85%). A very high proportion of married men (80.3%) would not want to keep it a secret that a family member was infected with HIV compared with men who have never married (62%). Men's attitudes toward those living with HIV are no different in the outer islands than in Funafuti. However, educated men with more than a secondary education are more accepting toward all four indicators (43%) than men who have less than a secondary education (24%).

7. Best practices

The Ministry of Health is strongly responsible for all treatment of HIV and other related diseases. TuNAC as a coordinating body actively guides all HIV and STI programs in the country and has a multi-sectoral membership. TuFHA is the leading NGO in conducting health education program on HIV and other related disease in the community and outer islands targeting young people. The HIV policy is still on draft form with the Attorney General's Office to proceed to cabinet for endorsement.

Significant progress was achieved with regards to integrating sexuality education in the national curriculum. Tuvalu drafted the first ever sexuality education curriculum for years 7-13.

Capacity building, with support from UNFPA, Tuvalu commenced the cycle 1 and cycle 2 teachers training in collaboration with MoE and lecturers from the respective national teacher training colleges.

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